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SURFACE WATER RESOURCES

OF

ASHLAND COUNTY

WISCONSIN CONSERVATION DEPARTMENT
MADISON 1
1966

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SURFACE WATER RESOURCES OF ASHLAND COUNTY

by

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Wisconsin Conservation Department
Madison, Wisconsin
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Conservation Department Fish Management Water Files

Forestry Inventory, 1956

Lake Classification Field Surveys, 1959-1966

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Public Service Commission Reports

Soil Surveys

State Highway Department Maps

Triannual Atlas and Plat Book, 1965

Weather Reporting Services

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INTRODUCTION

In 1959, the Legislature and Governor asked the Conservation Department to develop a program for classification of lakes by use. To fulfill this mandate, the Department must first prepare a water resources inventory to acquire the necessary data from which to formulate generalizations necessary for classification. Inventories are being prepared on a county by county basis to conform with other resource inventories conducted by the Conservation Department. The basic premise underlining this program is the growing realization that the uses to which surface waters are subjected is steadily increasing. As the number and intensity of demands increase, new conflicts of interest arise. There are conflicts between the angler, irrigator, speedboater, cottage owner and duck hunter, to name a few. These conflicting interest groups tend to infringe upon the activities of others. Often, certain uses are destructive to the very nature and future existence of the water resource. A method of insuring the continued enjoyment of this natural resource for the benefit of all concerned is therefore necessitated.

This inventory is intended to provide a summarization of the quantity, quality and character of the surface water resources of Ashland County, including both lakes and streams. Use potential will be described and methods of protection discussed. The inventory will have served its purpose if it can be used as an aid in planning for the wise use and good management of the waters of Ashland County.

Data for this inventory were gathered from a variety of sources. The principal sources were aerial photographs, U.S.G.S. maps, field inspections, interviews and actual sampling. Since this activity was approached as an inventory of recreational waters, little consideration was given to industrial and agricultural uses of surface waters. The waters files of the district fish managers were used in determining some of the fish species compositions. Because a definite time limit was necessarily imposed on data collections, detailed comprehensive surveys were not always possible.

GENERAL SETTING OF THE WATERS OF ASHLAND COUNTY

Geography

The continental divide between Lake Superior and the Mississippi Drainage Systems extends across the middle of Ashland County. Lake Superior and its tributary, the Bad River, drains 510 square miles of land and inland water area in the northern half of the county. The Chippewa River and its tributaries, the East and West Forks, and the Flambeau River drain 432 square miles of southern Ashland County. Landlocked drainage areas of 57 lakes account for 21.6 square miles, while land areas that have no permanent surface waters account for 4.6 square miles. The Apostle Islands with 79.1 square miles, comprise the remaining portion of the county's 1,047 square mile area (Fig. 1).

The slope of land is relatively steep northward toward Lake Superior from the central ridge of the Penokee Range that crosses the middle of Ashland County. The southern part is very gently sloping toward the south. Natural lakes and extensive marshes are a common feature in the central and southern part. The maximum land elevation is 1,872 feet at Mt. Whittlesey in the Penokee Range, and the minimum elevation is 602 feet above sea level at Lake Superior.

Geology

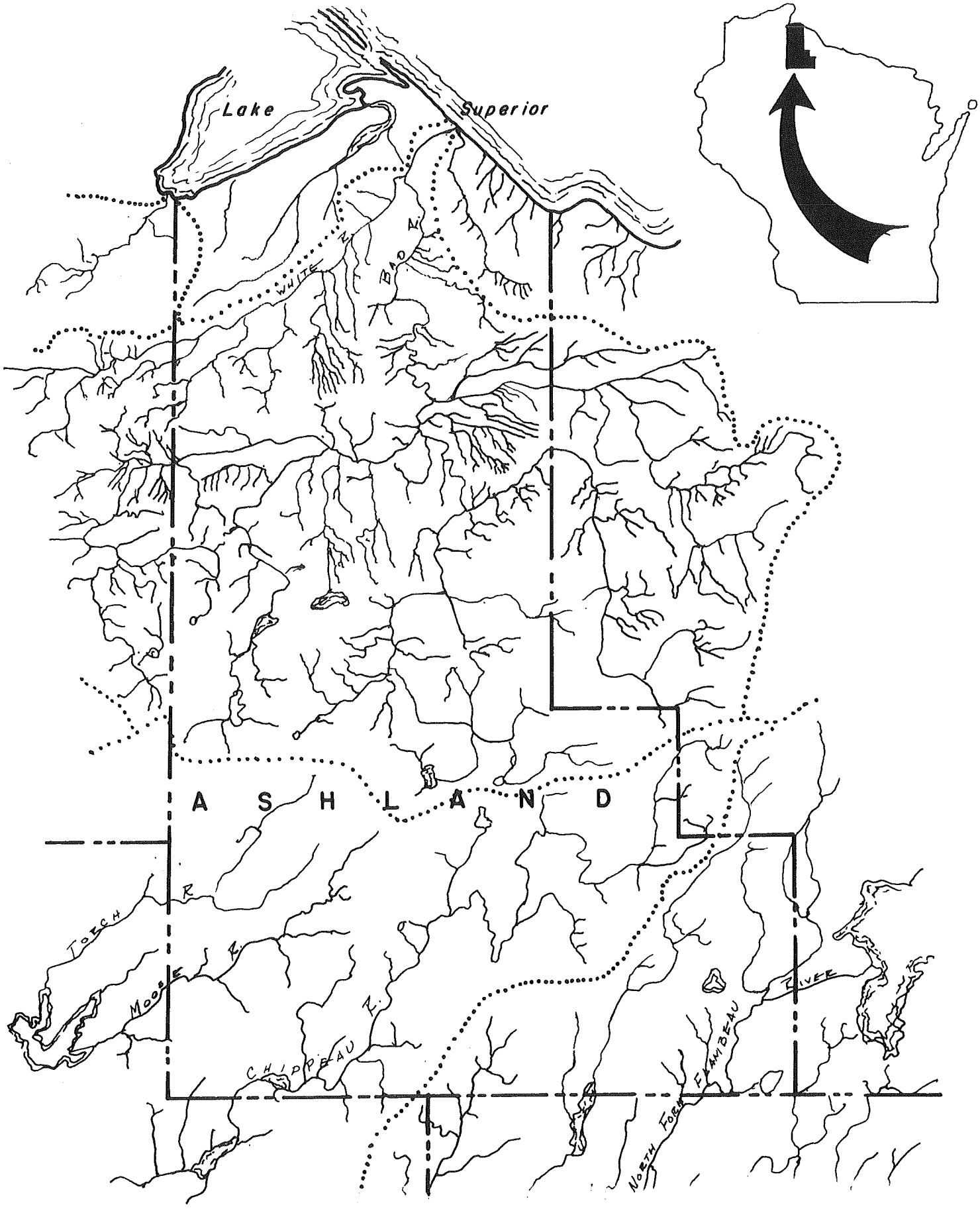
The bedrock formations are Lake Superior sandstone extending about 10 to 25 miles south of the lake, south of which lies a belt of the Keweenawan traprock, and south of the trap ridge formation is the Huronian formation of granite and metamorphic rocks in the Penokee Range and the unexposed bedrock formations to the south. Granite outcrop is common throughout the Penokee Range and is especially evident along the Marengo and Bad Rivers. The unexposed bedrock formations are generally covered with deposits of glacial ground moraines and pitted outwash moraines in the southern part of the county, while the central part is covered with end moraines, and the northern part beyond the exposed outcrop ridge is covered with red clay and stratified sand deposits of the prehistoric lake basin. (Weidman and Schultz, 1915).

Soils

The soil types of Ashland County, which greatly affect the chemical characteristics of the surface waters, are of two principal types. Lacustrine soils of calcareous drift in the northern, ancient lake bed area and upland glacial till of acid nature in most of the remaining part of the county. The exception to the latter is the small area of acid outwash soil in the extreme southwestern township of the county.

The northern red sandstone bedrock region is covered with a glacial till of red clays, stratified sands, and shale beds. This till reaches a maximum thickness of about 400 to 500 feet in the valleys adjacent to the lake. Further south, the glacial till is very thin or even absent in some places. Since the principal water-bearing formations in the northern part of the county are the surface deposits of glacial and stratified sands, the storage and subsequent outflow of the normally fertile groundwater springs in these shallow formations is small. The relatively large amount of precipitation combined with poor ground storage prohibits extensive solution of minerals and promotes rapid runoff, circumstances which greatly decrease the surface waters fertility. Low fertility is accentuated by passage of surface waters through extensive marsh and bog areas where nutrients are used up.

FIGURE 1 LOCATION OF ASHLAND COUNTY WITHIN THE STATE AND WITHIN MAJOR WATERSHEDS



The sandstone formation along Lake Superior contains a larger quantity of groundwater. However, the overlying clay deposits effectively prevent this water from reaching the surface as springs. The exception to this is along the immediate shore of Lake Superior where a narrow sand and gravel seam is not capped by clay and artesian water flows freely from the ground. The small quantity of water that does reach the surface as springs in the red clay region is usually of high quality and rich in carbonates and nutrients. The groundwater in the area south of the Penokee Range, however, is extremely poor in carbonates and nutrients and reflects poor solubility of these sandy underlying soils. These sandy siliceous soils and accompanying bogs produce waters with a low pH.

Another geological characteristic that greatly affects the water quality of the lakes is the pitted nature of the underlying granitic bedrock formations. The lakes which form in these pockets are shallow, tend to have stabilized water levels, which, combined with the acid nature of the soil contributes to the development of encroaching bogs on lakeshores and the presence of many bog lakes with their characteristic types of vegetation.

Table 1. Climatological data for stations in and near Ashland County.

	Temperature			Precipitation		
	Mean Monthly	Extremes		Mean (Inches)	Days of Rain 1)	Mean Snow (Inches)
Ashland	40.8	107°	-40°	28.0	61	49.5
Big St. Germain Dam	39.9	106°	-43°	31.6	69	53.6
Medford	41.8	104°	-37°	32.9	69	53.8
Mellen	40.8	105°	-49°	32.6	68	70.7
Merrill	42.9	110°	-39°	29.8	65	41.9
Prentice	40.8	107°	-45°	34.5	70	50.3
Rhinelander	41.6	108°	-41°	30.8	66	55.6
Solon Springs	41.3	108°	-47°	32.1	66	55.5
Spooner	42.4	110°	-46°	27.8	60	45.8
Weyerhauser	42.0	109°	-41°	30.1	60	43.3
Winter	38.9	107°	-46°	30.5	64	58.0

Source: Wisconsin Climatological Data, Wisconsin Crop Reporting Service, 1961

1) Days with rain of 0.10 inches or more.

Climate

The climate of Ashland County is classified as two types, modified continental in the north along the lake, and continental south of the Penokee Range. The average annual temperature is 40.8 degrees fahrenheit. Winters are long, snowy, and often severly cold. Spring and fall are often mixtures of both winter and summer. Summers are relatively short with warm days and cool nights. Hot and humid periods are infrequent. In the north, the climate is tempered by the influence of Lake Superior in all seasons. Spring and fall temperatures are usually warmer than those a few miles inland, resulting in a longer growing season near the lake. Ashland Harbor is usually icebound from December until April. Mean snowfall in inches varies from 49.5 near Ashland to 70.7 inches at Mellen. Near Ashland prevailing winds are westerly from early fall through early spring, and easterly the remainder of the year. April is the windiest month with an average of 15 miles per hour. July and August are the least windy with averages of 11 miles per hour. The highest speeds are usually from a westerly direction. The growing season, defined as the number of days between the last 32-degree freeze in the spring and the first in the fall, averages 109 days.

The climate of the Mellen area is influenced by the weather systems that move down from Canada and those that move across the country from southwest to northeast. Mean temperatures are about the same throughout the county, however, the precipitation varied an average of 4.9 inches annually with an average increase inland over that received along Lake Superior. Prevailing winds are from the northwest and west from late fall through early spring, and southerly the remaining months in over half of the county. April and November are the windiest months, while July and August are the least windy. The growing season also averages six days less in this area than in the north. Precipitation is the greatest during the months of May through September, with June being the highest. Rainfall during these months varies from 3 to 5 inches. The months with the least amount of precipitation are December, January and February, when precipitation of less than one inch can be expected. Ashland County falls in a region commonly referred to as the "snow belt" because it has more than 70 inches of snowfall per year. Of the total average of about 30 inches of precipitation received, about 13 inches runs off into the stream drainage systems. Discharge rates for rivers in this region are some of the highest in the state probably because of a combination of weather, soil conditions and topography.

Table 1 summarizes the climatic data, and Fig. 2 summarizes the mean annual precipitation and runoff for the northern Wisconsin region. Figs. 3 and 4 show the flow characteristics of some streams of northern Wisconsin and graphically illustrate the extreme flow variations. The most extreme variation in flow occurred in the Bad River. Over a period of 24 years the maximum discharge of this stream occurred on April 24, 1960 when the flow was observed to be 27,700 cu. ft. per second. Greater flows have been observed on this stream but have not been recorded by standard gauging methods. Minimum flow occurred on August 8, 1964 with 49 cu. ft. per second. The most extreme variation of flow occurred during the spring runoff as snowmelts took place before a ground thaw occurred. Extremes also occurred during periods following heavy rainfall. Minimum flows are observed immediately following freeze-up in the fall and continue to mid-March. Reasons for rapid runoff in the Bad River are the high gradient of the stream and the underlying bedrock and clay soils over which the stream's feeders rapidly collect surface runoff waters. The nearby Brule River in Douglas County has a stable flow of water and reflects the high volume of groundwater entering the stream and a less rapid rate of diffuse water runoff into the stream. Soil percolation of water is higher in this sandy region and the lengthy low gradient stream courses tends to retard runoff.

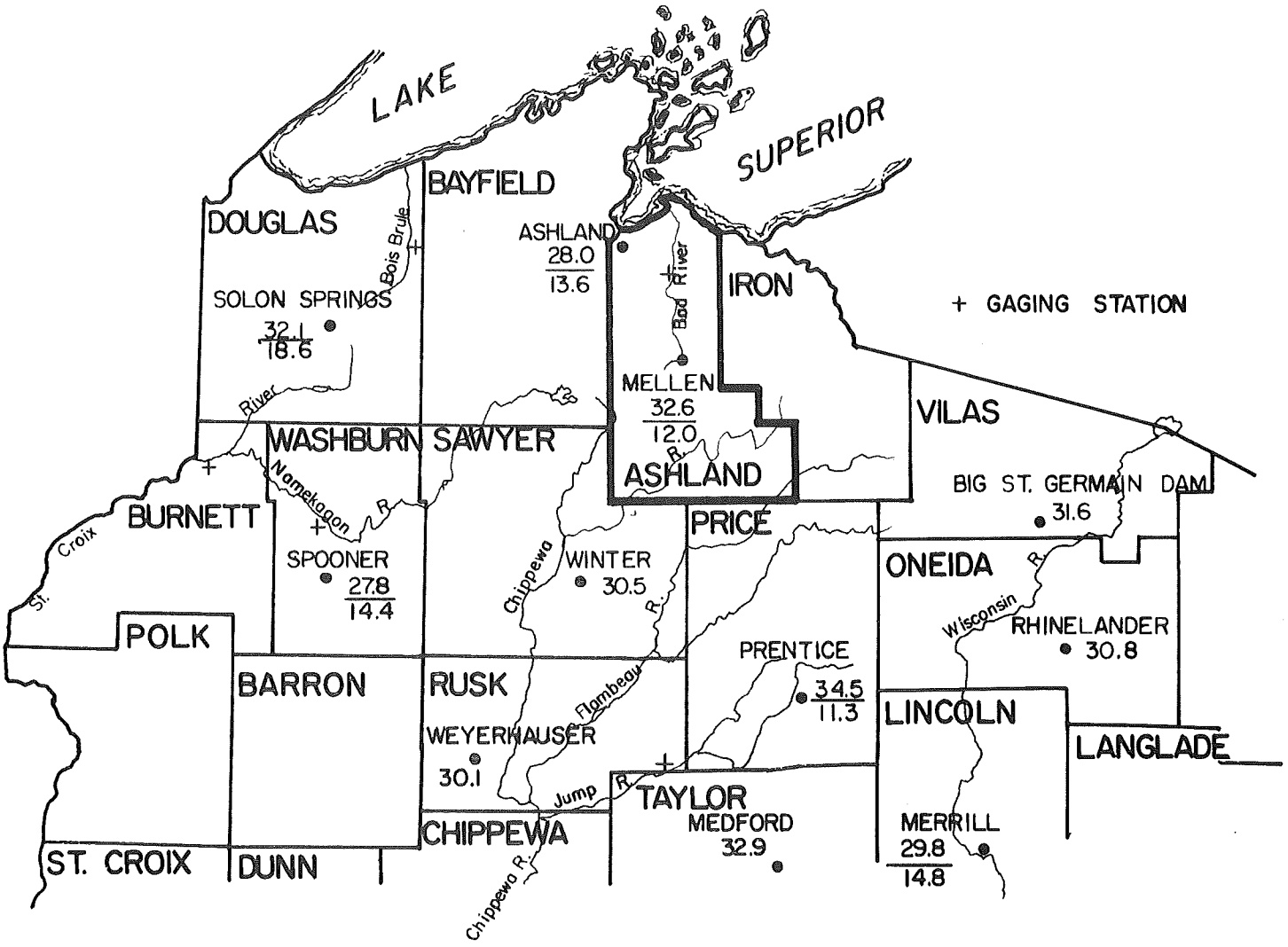


Fig. 2. Mean annual precipitation and runoff for stations in and near Ashland County (Wisconsin Climatological Data, 1961, and Surface Water Records of Wisconsin, 1961-1964.)

31.2 inches per year average precipitation in northern Wisconsin for 30-year period.

14.1 inches per year average runoff in northern Wisconsin for 4-year period.

Upper figure is amount of precipitation and the lower figure is the amount of runoff.

Fig. 3. Flow characteristics of some northern Wisconsin streams. Mean cubic feet per second flow for the calendar year 1963. (Surface Water Records of Wisconsin. U.S.D.I. - Geological Survey.)

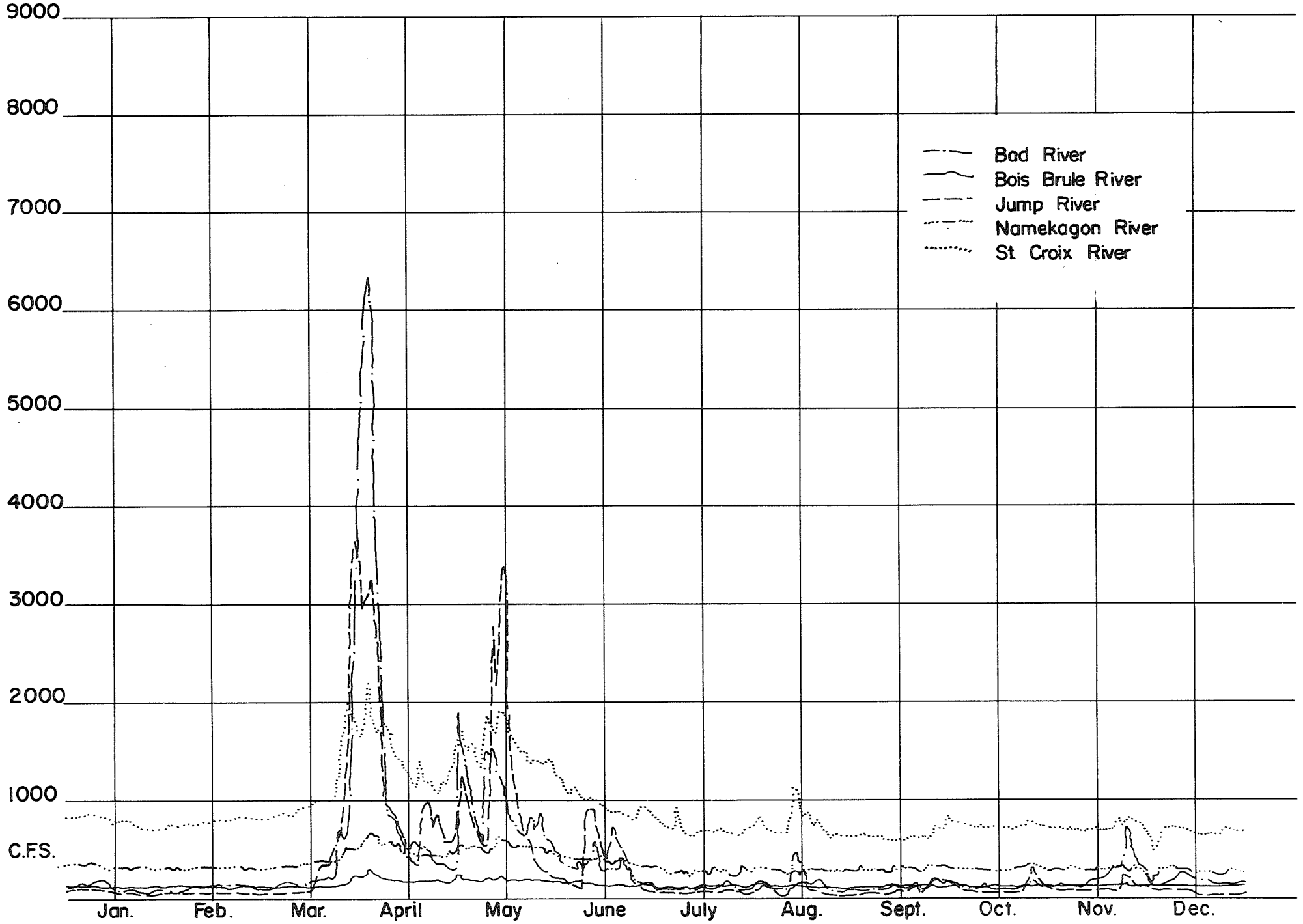
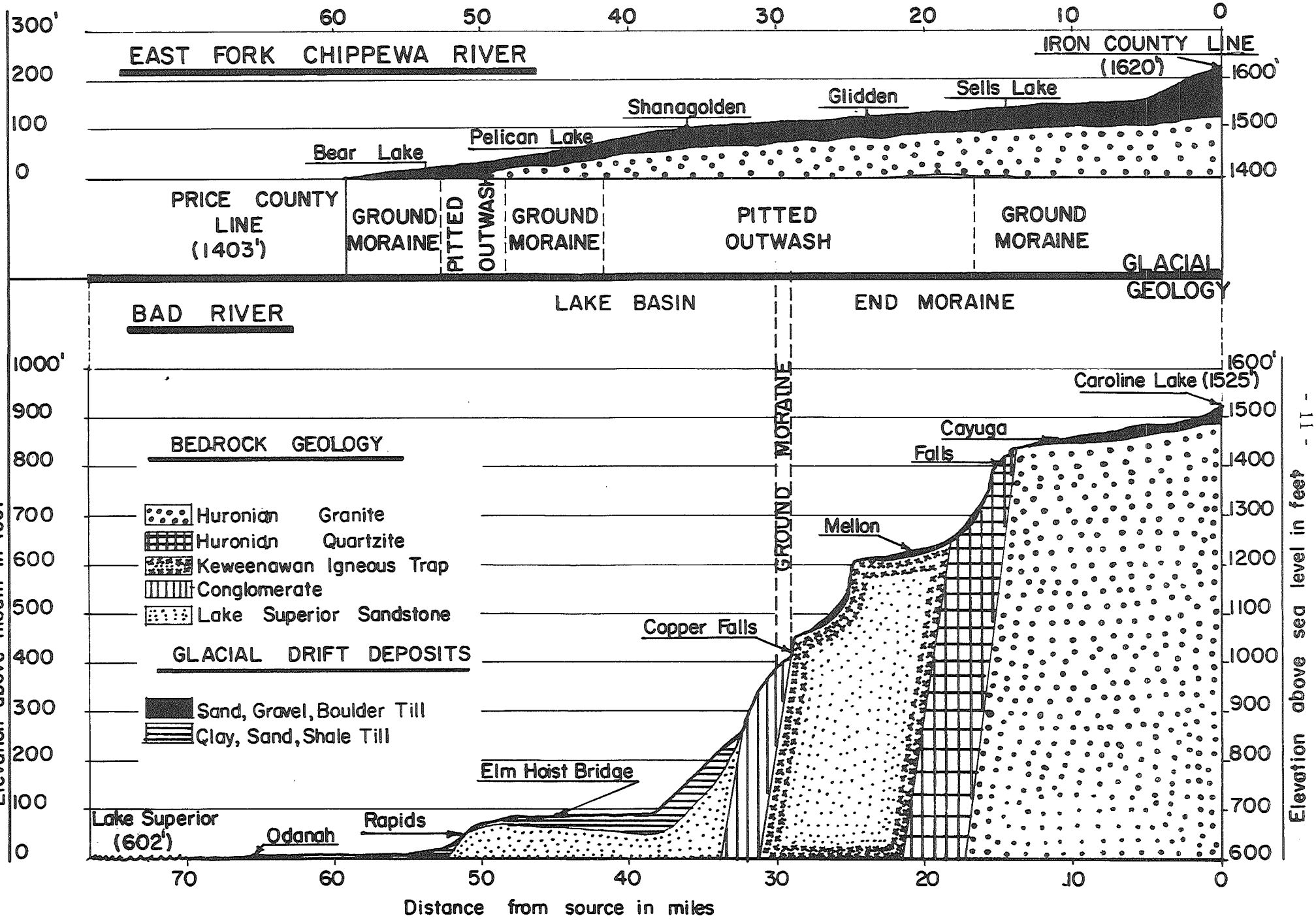


Fig. 4. Gradient profiles of two Ashland County streams.



Over a 22-year period on the Brule River the maximum discharge observed occurred on June 5, 1944 with a flow of 1,520 cu. ft. per second. The minimum observed occurred on March 13, 1943 with a 67 cu. ft. per second flow. Stream flows on the Namekagon River and the St. Croix River are also moderate compared to Ashland County streams. The flow on the Jump River in Rusk County is also extreme. This is due to the fact that the watershed is principally an agricultural region and runoff appears rapidly in the spring and early summer, while vegetative cover is slight.

Extreme fluctuations also occur in the levels of the streams in southern Ashland County, although the average stream gradient is low. Groundwater springs in this region contribute only a small amount of water to the streams. Any precipitation is noticed by an almost immediate large increase in stream discharge although runoff tends to be slower from the marsh and bog areas. Many streams have beaver dams which tend to retard runoff. Along with the retardation of runoff, stagnation of the surface waters occurs. Water becomes dark brown and more acid.

Land Use

The original vegetative cover of Ashland County was a boreal forest of white spruce and balsam fir along Lake Superior. Remnants of this forest remain but over much of the area there is now lowland brush and aspen. The region below this is hilly and wooded, and scattered with lakes, streams and swamps. The original forest cover here was mixed hemlock, sugar maple, yellow birch and white pine. "Eratic" boulders dot the hilly and stony soil surface and most of the farmland is marginal. Farming is still carried on south of Ashland and around Glidden and Butternut. Much of the land area is in the Chequamegon National Forest, Ashland County Forest, and Bad River Indian Reservation ownership.

Of the county's total 1,047 square miles of land acreage, 84 percent is forested land, 10 percent is farmland, and the remaining 6 percent is in nonproductive uses. Over 170,000 acres, or 25 percent of the county is swamp, bog or otherwise waterlogged soils. According to the Conservation Department forest inventory, of the 865 square miles of commercial forest in Ashland County, the various forest types are ranked as follows, with the square miles of each type: aspen - 331; northern hardwoods - 240; swamp hardwood - 58; fir - spruce - 55; upland brush and grass - 42; black spruce - 27; cedar - 24; tamarack - 10; Norway pine - 8; white pine - 5; jack pine - 2; and hemlock hardwoods - 1 square mile. Table 2 summarizes the land use factors that altogether influence the surface water quality and quantity of Ashland County. With such a high percentage of land in forest cover watershed conditions can be described as generally good. But with all the forest land streams running through the clay soils with their road cuts, raw banks and farmlands usually run red after every rain.

Table 2. Land use in Ashland County.

		Acres		Percent of total area	
Forest land:					
Commercial forest		553,660		82.6	
Noncommercial forest		8,720		1.3	
Total forest land			562,380		83.9
Nonforest land:					
Farm		66,540		10.0	
Marsh and muskeg		20,870		3.1	
Recreational, industrial, residential		3,490		0.5	
Right-of-way		8,290		1.2	
Rock outcrop and sand dune		1,210		0.2	
Total nonforest land			100,400		15.0
Water:					
Inland lakes:		4,854		0.7	
Natural	4,578				
Impoundment	276				
Streams:		2,446		0.4	
Total water			7,300		1.1
Total area of Ashland County:			670,080		100
(1,047 square miles, excluding Lake Superior waters)					

Source: Wisconsin Conservation Department Forest Inventory, except waters data.

DESCRIPTION OF THE WATERS OF ASHLAND COUNTY

A short descriptive paragraph of each body of water is provided in this section. Additional details are enumerated in Appendix I. Lakes, impoundments and streams have been defined for inventory purposes. A lake is all bodies of water which are navigable, meandered or public, and is wet nine out of ten years. Impoundments are those bodies of water which owe one-half or more of their maximum depth to an artificial impounding structure. The streams referred to in the inventory are all those which have a permanent flow or any streams of intermittent flow or seasonal flow which have significance for recreational purposes. For further definition of lake types, wetlands and other terms used to describe and classify waters, a glossary is provided at the end of this summary. Information pertaining to unnamed streams may be found in the descriptive paragraphs on lakes and named streams into which they flow.

In the preparation of the maps accompanying this summary, a numbering system was devised for unnamed lakes based on legal description. They are referred to by township, section and sixteenth section, etc. in which they are situated. The accompanying county waters maps illustrate this lake numbering system. The legal description designated for stream location refers to the stream's outlet location.

The maps reproduced in this publication were not intended for legal or regulatory use. They should, therefore, not be considered or used as factual or final authority because of natural or man-made changes which may have occurred.

Outlying Waters: Lake Superior

Lake Superior was formed by a complicated process of bedrock faulting and glacial action. Its surface is 602 feet above sea level, while its deepest part, a depth of 1,302 feet, is 700 feet below sea level. In the past 100 years, the lake's water level has varied from a high of 604 feet in 1876 to a low of 600 feet in 1926. Seasonal variations of 1.1 to 1.8 feet occur each year. The lake is at its highest level during the summer months and at its lowest level during the late winter and early spring months. Old lakeshore deposits covering the red clay soil region of the Lake Superior lowland shows that the lake has been as much as 220 feet higher. Other evidence of lake bottom deposits shows that at one time the level of Lake Superior had been at least 300 feet lower than at present in post glacial time (Hough, 1958). The lake basin receives an annual average rainfall of 29 inches.

Lake Superior is the largest freshwater lake in the world with an area of 31,800 square miles (20,352,000 acres). Its length is 350 miles and its width is 160 miles. These dimensions give Lake Superior near-ocean characteristics, the capacity to generate very high waves and strong currents. Waves as high as 22 - 23 feet have been reported at the Duluth Canal. Its depth is equally impressive, a maximum of 1,333 feet. Maximum depths are well below sea level.

The Ashland County boundaries include about 1/3 of the portion of Lake Superior within Wisconsin. Eighteen of the Apostle Islands are also included in this county's boundary area. Table 3 summarizes the island acreage and the amount of lakeshore, including public frontage. The Apostle Islands total area amounts to 50,643 acres, almost 17,000 of which is in public ownership. The Ashland County islands have a total shoreline of 153 miles, of which 42.75 miles is public frontage.

The mainland portion of Lake Superior has a shoreline of 32.76 miles. Characteristics of the Lake Superior shore are described in the Department of Resource Development's bulletin on the Lake Superior shore. From the Iron County line to the area just east of Honest John Lake are clay bluffs with a narrow sand beach on the lake edge. The shoreline from the bluffs to the Bayfield County line is low sand beach dunes. Inland from the sand beach lies the extensive slough waters of the Bad and Kakagon Rivers on the east and the Fish Creek Sloughs to the west. The City of Ashland lies on high ground between these two marshes. The Lake Superior shoreline is moderately high bluff, of about 70 feet, and beach sand dune formations that are easily eroded by wave action. Harbors and shelter areas for recreational boating are insufficient on Lake Superior. In the 13 miles of shore between the Michigan line and Chequamegon Bay, only Saxon Harbor in Iron County offers protection. Inexperienced boaters may expect to encounter difficulties on this big lake in adverse weather. Public accesses to Lake Superior from the mainland are located off 6th Avenue West (not improved) in the City of Ashland, and improved Boat Club access on the east end of the city, the improved Rod and Gun Club access near the Kakagon Slough, and an unimproved public landing near Nowago Creek at Indian Beach. There is a private access site at the Lake Superior Power Company plant. The climate and weather is favorable for recreational activities during the season of May through October. Shore ice prohibits shore use from early December through early May except for ice fishing on Chequamegon Bay. Water and air temperatures are usually too low for water sports by the average recreation seeker. Mean water temperatures in the Apostle Islands area, as reported by the U. S. Fish and Wildlife Service were 35.97° for May, 44.60° for June, 64.59° for July, 62.24° for August and 58.6° for September. Fog and storms are to be expected throughout the year, but are not frequent enough to hamper seriously recreational activity. With the exception of the development of private homes and industry in the City of Ashland, the shoreline is largely undeveloped. Madeline is the only island with permanent residents. The recreational activities along the Lake Superior shore include fishing, camping, hiking, hunting and scenic pursuits. Water sport activities such as sailing and pleasure boating are increasing and about half of the boating activity on the lake is of this type rather than for fishing.

Sport Fishery

Chequamegon Bay is the major sport fishing part of Lake Superior. It is about 34,000 acres in size and has a maximum depth of 61 feet. Its major fishery is northern pike, smallmouth bass, walleyes, yellow perch, and smelt. Northern pike are taken through the ice during the winter season by spear. These fish usually are of large size. Smallmouth bass and walleyes are taken throughout the bay, while the perch fishing grounds are found in the sand cut area south of Chequamegon point. Large size perch congregate here during the spring spawning season. The seasonal spawning runs of large schools of smelt also provide seining to the sport fishermen. Other game fish species caught in the bay include rainbow trout, brown trout, lake herring, rock bass, and an increasing number of lake trout. Bullheads also provide fishing in the Kakagon Slough area. Of the rough fish that occupy the bay, burbot are present in an abundant supply along with carp, white and longnose suckers, emerald shiners, spottail shiners and alewife. Other fish that are taken by the sport fishermen occasionally are bluegills, black crappies, pumpkinseeds, and muskellunge. The extreme upper end of the bay also provides some fishing for lake whitefish.

Table 3. Apostle Islands area and shoreline.

Island Name	Acreage	Miles of Shoreline	Acres of Public Land	Miles of Public Frontage
Basswood	1,879	7.74	603	1.12
Bear	1,714	6.80	--	--
Cat	1,291	7.60	59	1.66
Devil's	320	2.64	320	2.64
Gull	21	.26	21	.26
Hermit	742	3.90	--	--
Ironwood	662	3.80	--	--
Long	134	6.20	--	--
Madeline	15,176	32.00	947	2.13
Manitou	1,365	6.40	47	.53
Michigan	1,564	7.64	49	.27
North Twin	165	2.53	--	--
Oak	4,971	12.11	4,971	12.11
Otter	1,322	5.60	--	--
Outer	8,033	16.30	279	1.73
Rocky	1,112	7.60	--	--
South Twin	361	2.88	--	--
Stockton	9,811	21.00	9,631	20.30
Total	50,643	153.00	16,927	42.75
Lake Superior mainland		32.76		

The other major sport fishing areas among the islands include the following:

(a) Big Bay Area of Madeline Island provides good northern pike fishing.

(b) North Channel Area between Basswood Island and Madeline Island provides trolling for lake trout, rainbow trout, and brown trout, and is heavily used by the sport fisherman.

(c) Along the mainland shoal area from Long Island to the county line provides seasonal trolling for lake trout and brown trout. Walleyes are also common in this area, but are not often fished for by the sportsmen.

(d) Gull Island shoals, the shoal off the north end of Devils Island, and the shoal at the north end of North Twin Island provides seasonal trolling for lake trout.

(e) The shoal off the south shore of Stockton Island provides fishing for rainbow trout, brown trout and walleyes seasonally.

(f) The shoals on the north side of Oak Island and the northwest side of Cat Island provide seasonal trolling for lake trout.

The recreational lands that are presently being developed for use on the Apostle Islands includes the Big Bay State Recreation Area on Madeline Island and the Apostle Islands State Forest. The latter will include Basswood, Oak and Stockton Islands. A boat dock has been constructed on Stockton Island to provide ready access for the public.

Commercial Fishery

Commercial fishing in outlying waters is regulated by the Conservation Commission as specified in the Wisconsin Administrative Code, Chapter WCD 25. Methods used in these waters are gill nets and pound nets.

Certain waters of Ashland County are designated reserve waters and may not be fished by net or sethook. The reserve waters include Chequamegon Bay, which is bounded on the north by Chequamegon Point, Long Island, and a line to Houghton Point. Also, nets may not be set within one-quarter of a mile of any stream, dock, or pier, and at least one mile from the mouth of the Bad River. Commercial fishing for smelt is permitted only by the use of pound nets. The number of licensed fishermen on Lake Superior during 1964 included 13 full time operators and 46 part-time fishermen. Fishermen licensed in Ashland County were all part-time.

Commercial fishing for lake trout is allowed only by special permit and a quota has been established. The principal species harvested from these waters, in order of their abundance includes chubs, lake herring, smelt, lake whitefish, suckers, round whitefish. Other commercial species that are harvested which are of minor importance are burbot and perch. Lake trout were immensely more important in the commercial fishery and sport fishery years before lamprey depredations were felt and are steadily increasing at this writing. To improve the lake trout fishery, U. S. Fish and Wildlife Service personnel have treated most of the streams entering Lake Superior with a larvicide to kill off larvae of the sea lamprey. Since treatments, scarring of lake trout has fallen to about two percent of its former level.

Inland Waters

Named Lakes

Augustine Lake, T43N, R1W, Section 26
Surface Acres = 165.5 Maximum Depth = 10 feet, M.P.A. = 9 ppm, Secchi Disk = 4 feet

A soft water, seepage lake with an intermittent outlet to a feeder stream of Willerth Creek. The level of the lake is partially maintained by an old beaver dam with a height of about 18 inches. The most common fish are muskellunge, bluegills, and perch. Largemouth bass, pumpkinseeds, bullheads and suckers are also present. About 30 percent of the lakeshore is bog. Littoral vegetation is sparse, probably due to its relatively infertile and dark stained water. An occasional and unexplained summer fish-kill has occurred in the muskellunge population, the most recent being 1962. Beaver frequent the lake periodically. A small number of nesting puddle ducks may also be found here, however the lake's 250 acres of adjoining bog wetlands does not provide a great deal of suitable habitat for waterfowl. A boat livery is located on the west side and eleven cottages are scattered along the upland shores of the east and west sides. Although there are sandy stretches of beach, the shallowness and stained water detracts from the lake's desirability for swimming. A town access site is located at the south end. Ashland County Forest Land touches the bog area in the northeast corner with a total public frontage of .28 miles. The outlet stream is often intermittent and maintains a fish population of minnows.

Bad River Slough, T48N, R2W, Section 17
Surface Acres = 184.4, Maximum Depth = 7 feet, M.P.A. = 73 ppm, Secchi Disk = 5 feet

A hard water, drainage lake adjacent to Lake Superior with a broad outlet channel to the Bad River. This slough receives drainage water from intermittent flows of Honest John Lake and Denomie Creek. Also overflow water from the Bad River probably flows into the slough during periods of high water. The channels connecting the slough with Honest John Lake are choked with emergent vegetation and a high sand dune beach disconnects the slough from Lake Superior along the entire northeast shoreline. It has a variety of littoral and shore types, the majority being shrub swamp with some fresh meadow, bog, and hardwood and conifer swamp. The most common fish species found are northern pike, walleye, perch, rock bass and various minnow species. Less common are muskellunge, smallmouth bass, black crappies, pumpkinseeds, bullheads, sturgeon, suckers, redhorse, and burbot. The estimated 1,150 acres of wetlands connecting these waters provides an extensive nesting area for ducks. About one-half of the southern shoreline is unallotted federal government land. It is accessible only by boat from the Bad River. It has no private development of any kind; however, the north half of the slough is divided into small tracts of lakeshore ownership.

Bass Lake, T45N, R3W, Section 19
Surface Acres = 28.2, Maximum Depth = 10 feet, M.P.A. = 10 ppm, Secchi Disk = 3 feet

A soft water, seepage lake, landlocked and located in the northern agricultural area of the county. It has a fish population of bass and panfish. An occasional winterkill probably occurs. The littoral zone is predominantly sand and has only a sparse amount of vegetation. The wetland edge on the southeast is made up of sedges and bulrushes and provides some nesting habitat for mallards and blue-winged teal. There is a town road access at the north end of the lake. There are five farm dwellings on the surrounding lakeshore. Although there are no swimming facilities available some swimming is done near the access site.

Bay Springs, T41N, R2W, Section 6
Surface Acres = 1.9, Maximum Depth = 5 feet, M.P.A. = 83 ppm, Secchi Disk = Bottom

A small, spring pond that has an outlet flowing into Rocky Run Creek. Brook trout are present in both the outlet stream and the pond. The pond is almost devoid of aquatic vegetation and the shoreline vegetation is composed of 10 percent bog with the remainder in tag alder, black spruce and white cedar swamp. Its only private development is a fishing cottage on the north end and it lacks both public frontage and access. It is seldom used by waterfowl or furbearers. The estimated normal outlet flow from the spring pond is 1.8 cfs.

Bear Lake, T41N, R3, 4W, Sections 31, 36
Surface Acres = 219.7, Maximum Depth = 8 feet, M.P.A. = 43 ppm, Secchi Disk = 4 feet

A soft water, natural drainage lake on the East Fork of the Chippewa River. Its outlet flow is estimated at 250 cubic feet per second. The main fish population is composed of muskellunge, walleye and perch. Species which are less abundant are smallmouth bass, bluegills, black crappies, rock bass, pumpkinseeds, bullheads, white suckers and redhorse . It has a shoreline of predominantly sand with some gravel and minor areas of rock and muck. An extensive marsh borders the old river channel bay on the north side of the lake and provides about 130 acres of sedge and grass wetlands for nesting puddle ducks and mergansers. There is also some use by muskrats. Its private development consists of a resort and boat rental and fourteen cottages. A total of 3.13 miles of public frontage on the northeast shore is in Chequamegon National Forest Land. At present it does not have a public access.

Beaver Lake, T44N, R2W, Sections 16, 21
Surface Acres = 24.4, Maximum Depth = 8 feet, M.P.A. = 20 ppm

A soft water, drainage lake that is the main water source of Minnow Creek. A canoeable spring stream enters the lake from the northeast. The outlet flow of Beaver Lake was estimated to be 4.0 cubic feet per second. The principal fish population consists of largemouth bass and panfish, although muskellunge are also present. Bog birch covers most of the lake edge and its littoral vegetation is mainly yellow water lily and water milfoil. About ninety percent of the shoal area is muck and the remainder is sand bottom. There is a moderate amount of waterfowl use with a few puddle ducks and loons nesting. There is no significant use by muskrat or beaver. It has no public frontage or private development. Access is limited to a walking trail over private land near the outlet.

Beaver Lake, T43N, R4W, Section 31
Surface Acres = 60.8, Maximum Depth = 12 feet, M.P.A. = 7 ppm, Secchi Disk = 4 feet

A soft water, seepage lake, landlocked and probably created by an old railroad grade (10 feet in height) that impounds an intermittent feeder to the west fork of the Chippewa River. An extensive mat of floating bog occupies the main part of the upper section of the lake. Its fish population is probably limited to minnows. It has little waterfowl or furbearer use. A town road extends to the lake from State Highway 77. It has no private development and public frontage amounts to .72 miles of Chequamegon National Forest Land on the north side. A winter fish kill is probable.

Beaver Lake, T44N, R4W, Section 7
Surface Acres = 34.8, Maximum Depth = 12 feet, M.P.A. = 9 ppm, Secchi Disk = 5 feet

A soft water, seepage lake having an intermittent outlet to the headwaters of Spring Brook. It was chemically treated during 1965 for removal of a stunted panfish population and restocked with rainbow trout. An occasional partial winter fish kill occurs. A public access is located on the southwest shore and on the northeast there is a Chequamegon National Forest campground. The entire lakeshore is in federal ownership and there is no private development. Upland vegetation is aspen and Norway pine with a narrow margin of tag alder along the shoreline. The littoral area is mostly sand with an occasional mixture of gravel. Aquatic vegetation is scarce, except for a few yellow water lilies and cattails.

Beaver Dam Lake, T44, 45N, R4W, Sections 1, 36
Surface Acres = 120.4, Maximum Depth = 33 feet, M.P.A. = 23 ppm, Secchi Disk = 4 feet

A soft water, drainage impoundment on the Brunsweiller River. It has a fifteen foot head dam, owned by Martin Hanson, located on the outlet. Extensive shallow flowed areas occupy the bedrock and boulder outcropped gorge of the scenic river. The estimated normal outlet flow is 6.5 cubic feet per second. The lakeshore vegetation is seventy percent upland hardwood and conifer and about thirty percent tag alder and grassland. It has a large variety of aquatic vegetation but in only moderately dense stands. The fish population consists of mostly muskellunge, perch, black crappies, pumpkinseeds, and bluegills. Largemouth bass, bullheads, white suckers and mudminnows are also present. Beaver and muskrat are present as well as a few nesting puddle ducks. The only private development is eight cottages. Its only access is an unimproved landing off the town road at the north end.

Blueberry Lake, T41N, R1E, Section 21
Surface Acres = 2.4, Maximum Depth = 7 feet, M.P.A. = 8 ppm

An acid, bog lake, landlocked and has a fish population of minnows. It is surrounded by a black spruce - leatherleaf bog. It is entirely muck bottomed and subject to winterkill conditions. The twenty-nine acres of bog wetlands adjoining the lake provides a little habitat for furbearers or waterfowl. It has no private development, public frontage or access roads and is a wilderness type of lake.

Bullhead Lake, T41N, R2W, Section 11
Surface Acres = 14.0, Maximum Depth = 13 feet, M.P.A. = 25 ppm, Secchi Disk = 2 feet

An acid, bog lake situated in a large tag alder and conifer swamp. The outlet is the headwaters of Dorns Creek and its estimated normal flow is 3.5 cubic feet per second. The most common fish species present are perch, bullheads, and black crappies. Low dissolved oxygen levels may occasionally cause a partial winterkill. A few mallards and blue-winged teal may be found nesting here at times. Muskrat and beaver use is not significant. It has no public frontage, access road or private development.

Cammerer Lake, T43N, R1W, Sections 25, 36
Surface Acres = 14.8, Maximum Depth = 24 feet, M.P.A. = 17 ppm, Secchi Disk = 4 feet

An acid, bog lake, landlocked and situated on the southwest edge of a cedar bog. The lake was chemically treated in 1959 for removal of stunted panfish. Brook trout were introduced after treatment. It is almost entirely muck bottomed. The dense growth of water shield that existed along the lake edge prior to chemical treatment with rotenone was replaced by a scattered, moderate growth of yellow water lilies after treatment. A few puddle ducks use the lake edge for nesting and furbearer use is not significant. The entire lakeshore is in Ashland County Forest Land ownership and an access is located at the south end of the lake. It has no private development.

Camp Four Lake, T41N, R2W, Section 10
Surface Acres = 10.1, Maximum Depth = 19 feet, M.P.A. = 5 ppm, Secchi Disk = 19 feet

A soft water, seepage lake, landlocked and having a small fish population of perch, bluegills and suckers. It has clear water and practically the whole lake edge is sandy beach. The lakeshore vegetation consists of upland hardwood, with a few mixed hemlock and spruce, and a small sedge-meadow bay. The predominant submergent vegetation is Chara and Eriocaulon. There is a moderate amount of duck use with mallards and blue-winged teal being the principal users. Muskrat and beaver use is insignificant. It has no public frontage, access roads or private development.

Caroline Lake, T44N, R2W, Sections 24, 25
Surface Acres = 129.2, Maximum Depth = 8 feet, M.P.A. = 17 ppm, Secchi Disk = 2 feet

A soft water, drainage lake and headwaters of the Bad River. The normal estimated outlet flow is 3.0 cubic feet per second. The principal fish populations are muskellunge, largemouth bass, perch, bluegills, black crappies, pumpkinseeds, bullheads, and white suckers. It is occasionally affected by partial winterkills. A three foot head rock roller dam on the outlet raises the level of the lake somewhat and tends to alleviate the situation. The lakeshore vegetation is predominantly upland hardwood with a mixed conifer, hardwood and tag alder swamp area near the outlet and along the northeast shore on an intermittent feeder stream. About eighty percent of the shoreline is sandy with the remainder being scattered gravel and muck areas. The predominant aquatic plants are bulrushes, yellow water lilies, pondweed and coontail. Some use is made of the wetlands by nesting puddle ducks. It has no public frontage and is accessible only at a private access on the west shore. Private development consists of one cottage.

Conley Lake, T44N, R3W, Section 23
Surface Acres = 5.6, Maximum Depth = 25 feet, M.P.A. = 10 ppm, Secchi Disk = 11 feet

An acid bog, landlocked, and muck bottomed lake. Its fish population consists of largemouth bass, bluegills, perch, black crappies, rock bass, pumpkinseeds, bullheads, and white suckers. The immediate lakeshore vegetation is a margin of tamarack, white pine and leatherleaf bog. Its waterfowl, muskrat and beaver use is insignificant. There is no public frontage or private development and the only access is a private trail on the south end. Aquatic vegetation is virtually nonexistent except for some Chara.

Cranberry Lake, T43N, R4W, Section 33
Surface Acres = 8.3, Maximum Depth = 15 feet, M.P.A. = 26 ppm, Secchi Disk = 3 feet

An acid, bog lake having an intermittent outlet to a feeder stream of Upper Clam Lake. It is surrounded by a tamarack - spruce bog and its entire bottom is muck. The principal aquatic vegetation is water shield. Fish species present include largemouth bass, perch, bluegills, pumpkinseeds, bullheads and white suckers. It is of minimal value to waterfowl and furbearers. There is no private development or public frontage and the only access is a private trail.

Cub Lake, T41N, R4W, Sections 35, 36
Surface Acres = 31.0, Maximum Depth = 21 feet, M.P.A. = 9 ppm, Secchi Disk = 10 feet

An acid, bog and landlocked lake having a fish population of mainly panfish. Its complete fish population, however, includes muskellunge, largemouth bass, perch, bluegills, black crappies, pumpkinseeds, bullheads, and sucker A broad margin of tamarack, spruce and leatherleaf bog surrounds eighty percent of the lake. The remaining lakeshore vegetation is Norway pine. Aquatic vegetation is sparse with yellow water lilies being the only common species. Loons and a few puddle ducks use the lake during the nesting season. Beaver are absent and muskrat are not present in any significant numbers. It has no public frontage or access roads, and its only development is one cottage.

Cycle Lake, T42N, R1W, Section 25
Surface Acres = 36.6, Maximum Depth = 23 feet, M.P.A. = 11 ppm, Secchi Disk = 4 feet

A soft water, seepage lake, landlocked and having a lakeshore vegetation of grass upland and mixed hardwoods. Its fishery resource consists of largemouth bass, perch, bluegills, bullheads and mudminnows. Stunted panfish are a problem to its management. Its wildlife value is limited to nesting of a few ducks. Private development consists of one resort and boat rental place. It has no public frontage or access road.

Dead Horse Slough, T43N, R4W, Section 34
Surface Acres = 87.0, Maximum Depth = 7 feet, M.P.A. = 30 ppm, Secchi Disk = 3 feet

A soft water, drainage impoundment on the Torch River created by the roadbed of State Highway 77. Its normal outlet flow is approximately 4.0 cubic feet per second. This slough can be characterized as having a muck bottom, numerous snags, and extensive marsh grass and tag alder shore vegetation. Submarginal water quality and occasional winterkills limit its fish population to suckers and creek chubs, although, at one time, muskellunge were said to have been present. Even with a wetland area of over 400 acres, muskrat are not present in significant numbers. Beaver are absent in this section of the Torch River. Black ducks may be found nesting here. It is accessible only from Highway 77 by an unimproved access and it has no private development. Public frontage amounts to 2.5 miles of Chequamegon National Forest Land.

Ditmans Lake, T43N, R1W, Section 7
Surface Acres = 2.6, Maximum Depth = 17 feet, M.P.A. = 8 ppm, Secchi Disk = 3 feet

An acid, bog lake having an intermittent outlet flow to Dryden Creek. It is situated in a tamarack - spruce bog and is unusual in that it has iris along the whole lake margin, next to the bog. It is entirely muck bottomed and has a fish population of only minnows, probably due to winter freeze out conditions. The lake is of little significance to wildlife. It has no public access or private development and the entire lakeshore of .25 miles is in Ashland County Forest Land.

Dollar Lake, T44N, R2W, Section 22
Surface Acres = 13.2, Maximum Depth = 17 feet, M.P.A. = 5 ppm

An acid, bog lake, landlocked and having a fish population of largemouth bass, perch, bluegills, pumpkinseeds, bullheads and suckers. A large cedar and black spruce bog surrounds the entire lake and thereby limits its wildlife value. It has no public access or private development. All but the north shore of the lake or .36 miles of shoreline is in Ashland County Forest Land ownership.

Dry Lake, T43N, R2W, Sections 11, 12
Surface Acres = 18.0, Maximum Depth = 7 feet, M.P.A. = 20 ppm, Secchi Disk = 4 feet

A soft water, drainage lake situated on a feeder stream to the Bad River. Beaver have alternately raised and lowered the lake level by dam construction. Its basic fishery is an abundant minnow population, however, perch and largemouth bass are also present. It probably suffers an occasional winterkill. The shoreline vegetation is entirely fresh meadow and the bottom type is muck. Some muskrat and beaver are present along the nesting puddle ducks. It is a wilderness type lake having no public access or private development. The 1.08 miles of shoreline is entirely in Chequamegon National Forest Land ownership. The outlet flow is estimated to be normally 1.8 cubic feet per second.

East Twin Lake, T43N, R4W, Section 22
Surface Acres = 110.0, Maximum Depth = 15 feet, M.P.A. = 18 ppm, Secchi Disk = 4 feet

A soft water, seepage lake with extensive bog areas on the east and south shores. A small outlet with an estimated flow of 0.1 cubic feet per second is the headwaters of the Torch River. The most common fish species are muskellunge, perch and pumpkinseeds. Largemouth bass, black crappies, bullheads, white suckers and golden shiners are also present. Its waterfowl use is limited to the nesting of a few mallards and blue-winged teal. Muskrat and beaver use is insignificant. Private development consists of two cottages. Camping facilities and an access road are provided by the Forest Service and 1.51 miles of the shoreline is Chequamegon National Forest Land.

English Lake, T44N, R3W, Sections 4, 5, 7, 8, 9
Surface Acres = 244.2, Maximum Depth = 40 feet, M.P.A. = 29 ppm, Secchi Disk = 5 feet

A soft water, drainage lake on the headwaters of Trout Brook. Three small minnow feeders flow into the lake and estimated normal flow of the outlet is 0.53 cubic feet per second. Most of the lakeshore vegetation is upland hardwood and a few spruce; however, a large leatherleaf bog adjoins the lake at the west end. The lakeshore bottom type is mostly sand with a few scattered areas of gravel and rock. There is a variety of aquatic vegetation in moderate amounts. Its most common fish are muskellunge, largemouth bass, bluegills, black crappies, perch and pumpkinseeds. Walleyes were introduced into the lake in 1965. Muskrat are present in rather significant numbers and beaver are absent. Some use is made of the lake by nesting puddle ducks and other migratory waterfowl. Private development consists of a resort and boat rental place and fifteen cottages. The only public frontage is a town road access at the south end of the lake.

Eureka Lake, T44N, R2W, Section 14
Surface Acres = 42.0, Maximum Depth = 27 feet, M.P.A. = 24 ppm, Secchi Disk = 4 feet

A soft water, drainage lake situated between Lake Gallilee and Twin Lakes on the headwaters of Minnow Creek. The outlet flow fluctuates greatly, however, an estimated normal flow is 2.5 cubic feet per second. About seventy percent of the lakeshore is upland hardwood and conifer and the remaining thirty percent is in cedar, white pine and black spruce swamp. The lake edge bordering the swamp is muck bottomed while sand and gravel are common to the other areas. Its fish population consists of muskellunge, largemouth bass, bluegills, black crappies, pumpkinseeds, perch and suckers. Although there is a variety of aquatic plant life, it is sparse and not extensively used by aquatic wildlife. Its only development is one cottage. There is no public frontage other than the access, with a limited parking area at the northwest corner of the lake.

Gallilee, Lake, T44N, R2W, Sections 14, 15, 22, 23
Surface Acres = 211.5, Maximum Depth = 23 feet, M.P.A. = 24 ppm, Secchi Disk = 6 feet

A soft water, drainage lake on the headwaters of Minnow Creek. The outlet flow of an estimated 3.0 cubic feet per second dissipates into a large tamarack - spruce bog before reforming and entering Beaver Lake. The most abundant fish species are muskellunge, smallmouth bass, perch, black crappies, and pumpkinseeds. Other species present include largemouth bass, bluegills, and white suckers. About 80 percent of the lakeshore is muck bottomed and has extensive areas of aquatic vegetation. Most of the adjoining lakeshore is upland, except for fifty acres of wetlands which provide habitat for a few nesting ducks. Private development consists of four resorts, one private church camp, and twenty cottages. The lake does not have a public access or public frontage.

Gates Lake, T42N, R3W, Section 24
Surface Acres = 20.2, Maximum Depth = 13 feet, M.P.A. = 4 ppm, Secchi Disk = 10 feet

A soft water, seepage lake, landlocked and having a fish population of largemouth bass. An occasional partial winterkill and rare periods of low water levels make management of this water difficult. There is no private development as the entire lakeshore is in Chequamegon National Forest Land ownership. It is accessible by an unimproved road on the east shore. Aquatic vegetation is sparse and the lakeshore has a narrow margin of fresh meadow wetland surrounded by upland hardwoods and Norway pine. Beaver and muskrat use is insignificant and it is not used extensively by waterfowl.

Gilbert Lake, T44N, R4W, Section 15
Surface Acres = 3.8, Maximum Depth = 13 feet, M.P.A. = 23 ppm, Secchi Disk = 4 feet

An acid, bog lake surrounded by a black spruce, tamarack, and birch bog. It has an abundant population of minnow species. The outlet flow of approximately 0.3 cubic feet per second forms a headwaters feeder of Hell Hole Creek, a minnow stream. An occasional partial winterkill condition exists here. Pondweeds and yellow water lilies are common aquatic plants along with emergent sedges and iris. The lake is fed by a small spring stream entering on the northeast shore. There are two beaver dams at the lake outlet and waterfowl use is limited to a few nesting mallards and occasionally migratory ducks. The entire lakeshore is in Chequamegon National Forest Land, and having wilderness lake qualities, it does not have a public access or private development.

Gordon Lake, T43N, R2W, Sections 28, 33, 34
Surface Acres = 140.2, Maximum Depth = 28 feet, M.P.A. = 21 ppm, Secchi Disk = 4 feet

A soft water, drainage lake on Dryden Creek. The outlet has a 1.5 foot rock roller dam structure and an estimated flow of 6.0 cubic feet per second. Besides Zielke Lake outlet and Dryden Creek, there is a small minnow stream flowing from Torrey Lake into Gordon Lake. Its most common game fish are muskellunge and walleye. Other fish species present include perch, largemouth bass, bluegills, black crappies, rock bass, pumpkinseed, bullheads, white suckers, redhorse, burbot, trout, perch and hog suckers. It has diverse shore vegetation of birch and hemlock upland, cedar bog and tag alder swamp and smaller areas of fresh meadow. Aquatic vegetation is sparse. Wildlife and waterfowl use is limited to a few migratory ducks including a few nesting mallards and blue-winged teal. It has three resorts and boat rental places and fourteen cottages. A small town park with swimming beach and access road is located on the northeast bay. This is the only public frontage, except for the town road that separates Zielke Lake from Gordon Lake on the north. The town road shoulder has also been used as an access upon occasion but is unimproved. Although there are bulrushes and water lilies there is a lack of aquatic vegetation necessary for proper fish cover. The predominant predator fish population has contributed to an undesirably small population of panfish and forage minnows.

Hoffman Lake, T41N, R1E, Sections 26, 35
Surface Acres = 89.4, Maximum Depth = 6 feet, M.P.A. = 28 ppm

An acid, bog lake on Hoffman Creek whose outlet flow is estimated to be 2.0 cubic feet per second normally. The main fishery is minnows, although northern pike may be present occasionally. It is a winterkill lake with an extensive area of open leatherleaf bog on the south shore and a large black spruce bog on the north shore. Its wildlife value is limited to nesting mallards, blue-winged teal, and wood ducks, and a few fall migratory waterfowl. The west half of the lakeshore is in Wisconsin Conservation Department ownership as part of the Hoffman Lake Wildlife Area. It has no private development or access road.

Honest John Lake, T48N, R2W, Sections 20, 21
Surface Acres = 92.9, Maximum Depth = 8 feet, M.P.A. = 36 ppm

A soft water, seepage lake having a vegetation choked intermittent outlet to the Bad River Slough. Part of the flow from Denomie Creek seeps into the lake through a boggy area to the southwest. A high sand beach dune separates Honest John Lake from Lake Superior on the northeast. Although it probably suffers from an occasional winterkill, the fish population consists of northern pike, perch, pumpkinseed, and suckers. The variety of aquatic vegetation such as pickerel weed, wild rice, and marsh grasses on much of the lake edge attracts a number of nesting and migratory waterfowl. Furbearer use however is not significant. This wilderness quality lake within the Bad River Indian Reservation has no private developments or access roads. Ashland County owns .18 miles of shoreline on the north. Extensive wetlands of about 675 acres border the southern lake edge.

John Frank Lake, T44N, R4W, Section 12
Surface Acres = 5.4, Maximum Depth = 11 feet, M.P.A. = 24 ppm, Secchi Disk = 4 feet

An acid, bog lake having an intermittent outlet to Potter Lake. A dense cedar, tag alder swamp surrounds the lake. Its aquatic vegetation consists of water shield, bladderwort, sedge, and floating bog. There are old beaver dam structures on the outlet. An occasional winterkill takes place. It has a fish population of muskellunge, largemouth bass, bluegills, perch, pumpkinseed, bullheads, suckers, common shiners, golden shiners, and mudminnows. With wilderness lake qualities there is no private development or access road. The entire lakeshore of .40 miles is in Chequamegon National Forest ownership. Wildlife values are limited to a few nesting puddle ducks.

Kakagon Slough, T48N, R3W, Section several
Surface Acres = 294.2, Maximum Depth = 25 feet, M.P.A. = 46 ppm, Secchi Disk = 4 feet

A soft water, drainage lake off Chequamegon Bay, Kakagon River, Wood Creek, and Bear Trap Creek, the main feeder streams to the slough enter from the south. The flow from these streams is mostly drainage water. The water levels of Lake Superior also affect the levels and outlet flow of water from the Kakagon Slough. Surface area of the slough has been calculated from the town road bridges on the three streams to the bay and include only the surface waters that are free of emergent vegetation during the late summer months. Over 5, 300 acres of shallow and deep marsh wetlands of cattail, sedge, wild rice, and pickerel weed border the open water areas. Bottom types are mostly red clay with some sand. A variety of fish life exists, with populations of northern pike, walleye, largemouth bass, perch, bluegill, rock bass, pumpkinseeds, bullheads, white and longnose suckers, redhorse, common shiners and trout perch. Muskrat and beaver are present, along with a variety of nesting ducks that include mallards, black ducks, blue-winged teal, wood ducks, hooded mergansers, coot and green-winged teal. The slough has a high use by migratory ducks, coot, and Canada geese as well. The only public access is by navigable water from Lake Superior. The Northern Wisconsin Rod and Gun Club maintains a public access on Lake Superior one and one-half miles southwest of the slough. Three private accesses and boat rental places are located on the three inlet streams, where fees are charged for launching boats. The only other private developments are fifteen cottages owned by various individuals. Public frontage amounts to 3.31 miles of Town of Sanborn and Ashland County lands.

Kempf Springs, T41N, R2W, Section 3
Surface Acres = 2.7, Maximum Depth = 9 feet, M.P.A. = 57 ppm, Secchi Disk = Bottom

A spring pond area with a half-mile connecting stream to the East Fork of the Chippewa River. Outlet flow is estimated to be normally 2.5 cubic feet per second. Trout are present in the pond, actually a series of several sprawling ponds, and the stream. It is entirely muck bottomed, and a three-foot active beaver dam now impounds the springs. The surrounding vegetation is composed of mostly fresh meadow with some cedar - spruce bog and tag alder swamp. There is moderate migratory duck use, along with nesting by mallards, black ducks, and blue-winged teal. Muskrat use is not significant. This wilderness lake has no private development, access roads or public frontage.

Kenyon Springs, T42N, R2W, Section 31
Surface Acres = 6.6, Maximum Depth = 2 feet, M.P.A. = 70 ppm, Secchi Disk = Bottom

A spring pond area with an outlet stream a half mile in length flowing into the East Fork of the Chippewa River. Outlet flow of the stream was estimated to be normally 0.8 cubic feet per second. The series of three ponds and the outlet stream have brook trout present in them. Two additional artificial ponds upstream from the natural ponds are licensed as a private fish hatchery (#1699). The spring nearest the river has recently been impounded by a dam. Immediate shoreline vegetation is cedar, spruce, and tag alder. Aquatic vegetation is sparse except for filamentous algae. Beaver have occasionally constructed dams on these springs and, as a result, extensive siltation has taken place. Waterfowl and muskrat use is insignificant. As wilderness quality waters, there is no private development, access roads, or public frontage.

Knab Lake, T43N, R2W, Section 15
Surface Acres = 9.2, Maximum Depth = 7 feet, M.P.A. = 31 ppm, Secchi Disk = 5 feet

A soft water, drainage lake on Knab Creek. It has an inlet flow from nearby Summit Lake of about 0.1 cubic feet per second. The outgoing flow of Knab Creek was estimated to be normally 1.0 cubic feet per second. The fish population includes largemouth bass, smallmouth bass, perch, pumpkinseed, black crappies and white suckers. An occasional partial winterkill takes place. Immediate lakeshore vegetation is upland conifer and tag alder. Aquatic vegetation consists of cattails, sedge, white water lily, and pondweeds. Beaver are usually present while little use is made of the lake by muskrat and waterfowl. Its entire shoreline is muck bottomed and .38 miles of its .44 miles of shoreline is in Chequamegon National Forest ownership. It has no private development and is accessible from the west by an unimproved road over forest land.

Lindbergh Lake, T41N, R1E, Section 6
Surface Acres = 4.0, Maximum Depth = 1 foot, M.P.A. = 58 ppm, Secchi Disk = Bottom

A spring pond with its entire outlet flow being diverted to a private trout hatchery. The small stream immediately below the hatchery has brook trout, however most of this stream once known as Rabbit Creek is extensively damaged by old beaver flowages. At the present time active beaver dams near the outlet to Butternut Creek have created an extensive sedge and shrub swamp upstream for a distance of one mile. Lindbergh Lake is now extremely shallow and its only fish are a few minnows. Wildlife use is practically nonexistent also. There is no private development, other than the hatchery water diversion, access roads or public frontage.

Little Butternut Lake, T42N, R1W, Section 36
Surface Acres = 9.6, Maximum Depth = 11 feet, M.P.A. = 84 ppm, Secchi Disk = 6 feet

A hard water, drainage lake on Butternut Creek. An eighteen inch beaver dam maintains a higher lake level than is normal. The outlet flow is estimated to be 5.0 cubic feet per second normally. Its fish population consists of mainly northern pike, largemouth bass, and perch. Other species present are muskellunge, black crappies, pumpkinseeds, bullheads, and suckers. The lake is bordered by a spruce, tamarack, and tag alder swamp. Aquatic vegetation growth is extensive with species of equisetum, cattail, yellow water lilies, lemna, anacharis, and flat leaf pondweed. Beaver and muskrat are common here as well as nesting mallards, black ducks, blue-winged teal, and wood ducks. Extensive use of the lake is also made during migratory seasons by redheads and coot in addition to the species which nest there. It is accessible only by private access near the inlet and there is no public frontage or private development.

Little Clam Lake, T42, 43N, R4W, Sections 5, 32
Surface Acres = 144.2, Maximum Depth = 11 feet, M.P.A. = 8 ppm, Secchi Disk = 7 feet

An acid, bog lake, landlocked, and surrounded by an extensive open leatherleaf bog. Its fish population consists of mostly panfish with perch, pumpkinseeds, and bluegills being the most abundant. The other species present include muskellunge, largemouth bass, rock bass, and common shiners. An occasional partial winterkill and a stunted panfish population are problems to its management. Waterfowl use includes nesting loon and a few nesting puddle ducks, and moderate to light use by migratory birds. Its private development consists of a resort, boat rental place and a cottage. It is accessible on the northwest shore from the forest road that divides the lake into two parts near its center. Public frontage amounts to 0.13 miles of shoreline on state-owned Snowshoe Island and 3.35 miles of shoreline in Chequamegon National Forest Land ownership.

Long Lake, T45N, R4W, Section 19
Surface Acres = 20.0, Maximum Depth = 5 feet, M.P.A. = 11 ppm, Secchi Disk = Bottom

A soft water, seepage lake, landlocked and having a fish population of minnows, brook sticklebacks, and mudminnows. It is subject to winter freeze out conditions. Lakeshore vegetation includes tamarack on the north and tag alder and aspen on the south. Littoral vegetation consists of cattail, sedges, water lilies and water shield. Waterfowl and furbearer use is minimum. The entire lakeshore is in Chequamegon National Forest ownership, and access is by unimproved trail. There is no private development.

Long (Leland) Lake, T44N, R2W, Sections 29, 32
Surface Acres = 108.9, Maximum Depth = 15 feet, M.P.A. = 14 ppm, Secchi Disk = 4 feet

A soft water, drainage lake with an estimated outlet flow of 6.5 cubic feet per second draining into Minnow Creek, a half mile away. The outlet flow varies considerably. The fish population includes largemouth bass, perch, black crappies, bluegills, rock bass, pumpkinseeds, and white suckers. The lake edge has a narrow border of tag alder and beyond this area, vegetation includes upland hardwood, scattered spruce and white pine, and several tamarack swamps. Aquatic vegetation is scarce except for an area of bulrushes near the outlet. Waterfowl use is limited to a few nesting mallards, blue-winged teal, and wood ducks, and limited migratory duck use in the fall and spring. It is accessible only by private access, and there is no public land on the lake. Private development consists of six cottages.

Loon Lake, T45N, R2W, Section 29
Surface Acres = 34.0, Maximum Depth = 21 feet, M.P.A. = 11 ppm, Secchi Disk = 9 feet

A soft water, seepage lake, landlocked and having a fish population of largemouth bass, pumpkinseed, bluegills, black crappies, white suckers, and fathead minnows. Due to low water fertility, managing the slow growing panfish population is difficult. Ninety percent of the littoral lake bottom is sand and the remainder along the southeast bog area is muck. Shore vegetation is predominantly upland hardwood with scattered white pine and tamarack. Aquatic vegetation is sparse and includes bulrushes, water plantain, and yellow water lily. Public access and a swimming beach is provided on the north end where Copper Falls State Park borders the lake. Nesting waterfowl include a few blue-winged teal and loon. Private development consists of one resort and boat rental place and eight cottages. Two nearby granite quarries have occasionally caused a turbidity and siltation problem from overflowing wash waters. In 1958 the lake was chemically treated for removal of the stunted panfish population. It was subsequently restocked with largemouth bass. Complications caused by high water levels the following year, however, resulted in an ineffectiveness of this type of management.

Luebke Lake, T41N, R1E, Section 6
Surface Acres = 7.8, Maximum Depth = 9 feet, M.P.A. = 12 ppm

A soft water, seepage lake, landlocked and having a fish population of minnows. It is licensed as a private fish hatchery (#1998). The lake is surrounded by pasture land, and a farm is located on the hill at the southwest end of the lake. Waterfowl and wildlife value and use is minor. It has no access road or public frontage.

McCarthy Lake, T43N, R3, 4W, Sections 7, 12
Surface Acres = 41.6, Maximum Depth = 2 feet, M.P.A. = 45 ppm, Secchi Disk = Bottom

A soft water, drainage lake on the Iron River. The outlet flow varies greatly but has an estimated normal flow of 2.0 cubic feet per second. Two small minnow feeder streams flow into the lake from the south and the outlet has an active beaver dam. Shore vegetation is conifer swamp, tag alder and marsh grass. More than eighty percent of the bottom is muck with aquatic vegetation of water lilies, coontail, and flat leaf pondweed. A winterkill condition exists here and its main fish population is minnows with a few perch and bluegills present also. Migratory waterfowl use, including geese, is high along with nesting of mallards, black ducks, blue-winged teal and wood ducks. It has no private development and the entire lakeshore is in Chequamegon National Forest Land ownership. It is accessible by trail to a point near the outlet. Boat launching from this public access, however, would be difficult.

Mc Laren Lake, T42N, R4W, Sections 6, 7
Surface Acres = 66.0, Maximum Depth = 12 feet, M.P.A. = 2 ppm, Secchi Disk = Bottom

A soft water, seepage lake, landlocked and having a fish population of bluegills and perch. Almost the whole lake edge has a hard bottom and shore vegetation is predominantly upland hardwood with some scattered pine and small tamarack bog areas. Aquatic vegetation is sparse with some pickerel weed, water lilies and sedges. Loon and a few puddle ducks use the lake edge for nesting and only minor use is made by other migratory waterfowl. Private development consists of five cottages and it does not have a public access. Public frontage amounts to .19 miles of Chequamegon Forest Land on the southeast shore.

Meder Lake, T44N, R2W, Section 20
Surface Acres = 131.3, Maximum Depth = 10 feet, M.P.A. = 17 ppm, Secchi Disk = 4 feet

A soft water, drainage lake having a small but variable outlet flow to Minnow Creek. The outlet stream is a quarter of a mile long minnow stream. The estimated normal lake outlet flow is 2.0 cubic feet per second. The lake may occasionally suffer from a partial winterkill, and the fish population consists of walleyes, muskellunge, largemouth bass, perch, bluegills, black crappies, pumpkinseeds, bullheads, and white suckers. There is a variety of shore vegetation with some upland hardwood and conifer, with other sections of swamp hardwood tamarack, spruce, and tag alder. A few mallards and blue-winged teal may nest on the lake edge, but migratory waterfowl use is minor. It is accessible on the west shore at a town road access with limited parking. This access is the extent of its public frontage. Private development consists of two resorts, a boat rental place and four cottages.

Meyer Lake, T42N, R1W, Section 7
Surface Acres = 14.1, Maximum Depth = 27 feet, M.P.A. = 8 ppm, Secchi Disk = 10 feet

An acid bog lake, landlocked, and having a fish population of bass and panfish which includes largemouth bass, perch, bluegills, black crappies, rock bass, pumpkinseeds, bullheads, and white suckers. A slow growing panfish problem exists in this infertile water. Except for possibly a few nesting puddle ducks its other wildlife value is limited. There is no private development other than a nearby farm, and public access and public frontage is also lacking. Aquatic vegetation is sparse and lake edge vegetation is entirely tamarack, black spruce, and leatherleaf bog.

Mineral Lake, T44N, R4W, Sections 11, 12, 13, 14
Surface Acres = 225.1, Maximum Depth = 26 feet, M.P.A. = 28 ppm, Secchi Disk = 5 feet

A soft water, drainage lake on the Brunsweiller River. The normal outlet flow is estimated to be 5.0 cubic feet per second. The three inlet feeder streams, the Brunsweiller River, Camp Six Creek, and an unnamed feeder from Potter Lake are all minnow streams. Its fish population consists of muskellunge, perch, bluegills, black crappies, pumpkinseeds, black bullheads, and white suckers. Lakeshore vegetation is diverse with areas of aspen, birch, Norway pine, balsam, and tag alder. Bottom types also vary from areas of muck to sand, gravel and rock. With the exception of a few nesting puddle ducks the lake is not noted for being a waterfowl lake. It is accessible at the northeast bay at a town road access and .80 miles of Chequamegon National Forest lakeshore lies on the north end. Private development consists of one resort and boat rental place.

Moquah Lake, T44N, R4W, Sections 33, 34
Surface Acres = 75.7, Maximum Depth = 5 feet, M.P.A. = 27 ppm, Secchi Disk = 4 feet

A soft water, drainage lake connected directly to Spider Lake at the inlet. Outlet flow is estimated to normally be 3.0 cubic feet per second and is the headwaters of the Brunsweiller River. Its fish population is predominantly panfish, and includes pumpkinseeds, perch, and black crappies. Muskellunge and largemouth bass are also present, along with white suckers and an abundant mudminnow population. Lakeshore vegetation is mostly hardwood and conifer upland along with about twenty-five percent bog shore. Aquatic vegetation includes moderate stands of bulrushes, water lilies, coontail, and pondweed. Vegetation in the connecting channel to Spider Lake becomes excessive during midsummer months. It has moderate migratory waterfowl use and nesting ducks include mallards, black ducks, blue-winged teal and wood ducks. Muskrat and beaver use is not significant. It is accessible only by water access from Spider Lake and private development consists of four cottages. A total of 1.68 miles of Chequamegon National Forest Land fronts the lake in various places. Due to the lengthy and narrow shape of the lake it exhibits some stream characteristics. A boulder outcrop of bedrock at the outlet serves to maintain the lake level at its downstream boundary. About twenty percent of the lake bottom is sand or rock and the remainder is muck.

Mud Lake, T43N, R4W, Section 17
Surface Acres = 9.6, Maximum Depth = 14 feet, M.P.A. = 10 ppm

An acid, bog lake having an intermittent outlet to the West Fork of the Chippewa River. It is entirely muck bottomed and has shore vegetation of black spruce and leatherleaf bog. Its fish population consists of slow growing perch, common shiners, and mudminnows. Its wildlife value is minor. Being a wilderness quality lake it has no private development or access road. A total of .28 miles of Chequamegon National Forest Land borders the lake on the west.

Muskellunge Lake, T42N, R3W, Section 13
Surface Acres = 21.1, Maximum Depth = 8 feet, M.P.A. = 31 ppm, Secchi Disk = 2 feet

A soft water, drainage lake entirely surrounded by a tag alder shrub swamp. It has three inlet streams, Muskellunge Creek from the northwest and an unnamed feeder from the southwest, both minnow streams and a small brook trout feeder stream from the northeast. Outlet flow varies considerably, but the estimated normal flow is approximately 2.0 cubic feet per second. Winterkill conditions and slow growing panfish are management problems. The fish populations include muskellunge, largemouth bass, perch, bluegills, black crappies, rock bass, pumpkinseeds, bullheads, white suckers, redhorse, and common shiners. Ninety-five percent of the bottom type is muck with the remainder being rock. An extensive wetland of about 1,075 acres surrounds the lake and provides some nesting habitat for puddle ducks. Other migratory duck and furbearer use is light. There is one cottage on the north shore and public access is lacking. Public frontage amounts to .6 miles of Chequamegon National Forest Land.

Parker Lake, T41N, R1W, Section 22
Surface Acres = 12.6, Maximum Depth = 6 feet, M.P.A. = 60 ppm, Secchi Disk = Bottom

A hard water, drainage lake surrounded by a tamarack - tag alder swamp and a sedge - cattail marsh. Several springs and a short minnow inhabited feeder stream flow directly into the lake on the east and south shores. The outlet with an estimated normal flow of about 1.5 cubic feet per second is a broad low gradient feeder to Butternut Creek also inhabited by minnows. The lake is subject to winterkill conditions and its fish population consists of bluegills, perch, bullheads and white suckers. It is entirely muck bottomed and vegetation other than the cattail and sedge emergents is sparse. Some puddle ducks nest on the lake edge, while other migratory duck, muskrat, and beaver use is minor. There is no private development, access roads, or public frontage.

Pelican Lake, T41N, R3W, Sections 1, 2
Surface Acres = 45.5, Maximum Depth = 10 feet, M.P.A. = 54 ppm, Secchi Disk = 4 feet

A hard water, drainage lake on the East Fork of the Chippewa River. The normal outlet flow of the river is estimated to be 175.0 cubic feet per second. Its fish population consists of muskellunge, walleyes, smallmouth bass, perch, rock bass, pumpkinseeds, and suckers. The near shore lake bottom types consist of mostly sand with some gravel and rock. Shallow bay areas are muck bottomed. A moderate amount of aquatic vegetation exists with the most common species being bulrushes, pickerel weed, water lily, coontail and pondweeds. Most of the shore vegetation is upland hardwood and conifer. Access is by water from upstream and a private access from the west. It has two cottages and public frontage amounts to 4.72 miles of Chequamegon National Forest Land. Muskrat and nesting puddle ducks are common. It is medium in importance for other migratory waterfowl.

Pole Lake, T42N, R4W, Section 6
Surface Acres = 12.5, Maximum Depth = 21 feet, M.P.A. = 21 ppm

A soft water, seepage lake, landlocked, and having a fish population of largemouth bass, perch, pumpkinseeds, bluegills, black crappies, and suckers. The southeast-southwest lakeshore is spruce bog and the remainder is aspen, birch and Norway pine. Aquatic vegetation is sparse. Wildlife values are limited to minor use by nesting ducks. It is a wilderness type lake surrounded entirely by Chequamegon National Forest Land. It lacks private development and an access road.

Potter Lake, T44N, R4W, Sections 12, 13
Surface Acres = 29.2, Maximum Depth = 8 feet, M.P.A. = 31 ppm, Secchi Disk = 5 feet

A soft water, seepage lake with an intermittent outlet to Mineral Lake. Its fish population consists of muskellunge, largemouth bass, perch, black crappies, pumpkinseeds, white suckers, and golden shiners. An occasional partial winterkill takes place. The shore vegetation is made up of aspen and dense tag alder swamp. The predominant aquatic vegetation is bulrushes and yellow water lily. Beaver are present on the intermittent outlet stream and the intermittent inlet stream from John Frank Lake to the north. Its waterfowl value is limited to a few nesting mallards and black ducks. It has no private development since the entire lakeshore is in Chequamegon National Forest Land ownership. It is accessible by public road from the south.

Seagels Lake, T42N, R2W, Section 9
Surface Acres = 7.2, Maximum Depth = 9 feet, M.P.A. = 6 ppm

An acid, bog lake, landlocked, and having a fish population of panfish. It is subject to winterkill conditions and has a slow growing fish population. A spruce - leatherleaf bog surrounds the entire lake, and the bottom type is muck. Due to the bog shoreline, wildlife value is minor. This wilderness type lake has no private development, access road, or public frontage.

Seitz Lake, T44N, R4W, Section 4
Surface Acres = 18.7, Maximum Depth = 5 feet, M.P.A. = 59 ppm, Secchi Disk = Bottom

A hard water, drainage lake on the headwaters of Spring Brook. The normal outlet flow is estimated to be 0.7 cubic feet per second. The immediate lakeshore vegetation is dense tag alder swamp with an upland edge of aspen and balsam. The lake bottom is entirely muck with several springs flowing from near the center. Aquatic vegetation is dense with beds of coontail, pondweed, water lilies, and cattail. The main fish population is perch, pumpkinseed, bluegill, rock bass, and white sucker. However, muskellunge and brook trout are also present. The two inlet feeders are trout water and part of the Spring Brook water system. Its wildlife value is limited to a few nesting puddle ducks and minor use by other migratory waterfowl. It has no private development or access roads. Its public frontage amounts to .38 miles of Chequamegon National Forest Land covering the east half of the lakeshore.

Sells Lake, T42N, R1W, Sections 8, 9
Surface Acres = 16.2, Maximum Depth = 5 feet, M.P.A. = 67 ppm, Secchi Disk = Bottom

A hard water, drainage lake on the East Fork of the Chippewa River. The normal outlet flow is estimated to be 40.0 cubic feet per second. The predominant fish population is minnows with fourteen different species represented. Fish species of minor importance are muskellunge, largemouth bass, smallmouth bass, brook and brown trout. Lakeshore vegetation varies between pastured upland of hardwoods, conifer, and grasses, to wetlands of mixed hardwoods, dogwood, willow, tag alder, and fresh meadow. About seventy-five percent of the lake bottom is sandy with the remainder gravel, rock or muck. The most common aquatic vegetation includes stands of equisetum and water celery, and beds of yellow water lily, eel grass, pondweeds and nitella. Muskrat use is significant while beaver are usually absent. Nesting waterfowl include mallards, black ducks, blue-winged teal, wood ducks, and hooded mergansers. There is a moderate amount of duck and coot use during migratory seasons. It is accessible only by private access off the town road on the north end. Private development consists of two farm homes and public frontage is lacking.

Slim Lake, T41N, R2W, Section 14
Surface Acres = 15.0, Maximum Depth = 33 feet, M.P.A. = 8 ppm

An acid, bog lake, landlocked, and surrounded by a black spruce - leatherleaf bog. It is a panfish lake with a fish population consisting of perch, bullheads, and white suckers. Aquatic vegetation is scarce in this clear water, muck bottomed lake. Its wildlife value is limited to a few nesting wood ducks. Private development consists of one farm home. It does not have public frontage or an access road.

Snooze Lake, T41N, R4W, Section 31
Surface Acres = 23.9, Maximum Depth = 13 feet, M.P.A. = 35 ppm

A soft water, seepage lake having an outlet with a normal estimated flow of 0.2 cubic feet per second, flowing south into the East Fork of the Chippewa River. The outlet and the small inlet on the north end are minnow streams. A three foot headwater control structure maintains the lake level. Its fish population consists of largemouth bass, bluegills, perch, pumpkinseeds, and minnow species. It is subject to an occasional partial winterkill. The lake's north shore has a tamarack and cedar bog shoreline while the remainder is mostly upland vegetation of birch, white pine and spruce. Waterfowl and furbearer use is minor, except for a few nesting puddle ducks. The only private development is one cottage. The lake lacks a public access road and public frontage.

Snowshoe (Billard) Lake, T44N, R2W, Section 21
Surface Acres = 25.5, Maximum Depth = 11 feet, M.P.A. = 18 ppm

A soft water, drainage lake on a minnow feeder stream to Minnow Creek. Normal outlet flow is estimated at 2.7 cubic feet per second. The inlet feeder on the north is also a minnow stream, while the lake has largemouth bass, perch, bluegills, pumpkinseeds, and bullheads. The north and south shores have a vegetation cover of tag alder and bog birch swamp, while the east and west shores are mixed upland hardwood. Waterfowl and furbearer use is minor. As a wilderness quality lake it has no private development or access road and there is no public frontage.

Spider Lake, T43N, R4W, Sections 3, 4
Surface Acres = 103.4, Maximum Depth = 20 feet, M.P.A. = 27 ppm, Secchi Disk = 5 feet

A soft water, drainage lake on the headwaters region of the Brunsweiller River. The normal outlet flow is estimated to be 3.0 cubic feet per second. The three feeder streams, Spider Creek, an unnamed stream from the south and an unnamed stream in the northeast, are all drainage streams with minnow populations. The Spider Lake fish population consists of muskellunge, largemouth bass, perch, bluegills, black crappies, pumpkinseeds, white suckers, golden shiners, and mudminnows. Littoral bottom type is mostly sand with other areas of gravel, boulders, and muck. There is an excessive amount of aquatic vegetation, mainly pondweeds, coontail, yellow water lily, and bulrushes. Moderate use of the lake is made by nesting puddle ducks. Private development consists of eight cottages. A public access with parking area is located on the west shore; there is no other public frontage.

Spillerberg Lake, T43N, R2, 3W, Sections 18, 19, 13, 24
Surface Acres = 70.0, Maximum Depth = 25 feet, M.P.A. = 33 ppm, Secchi Disk = 8 feet

A soft water, drainage lake having an outlet flow of an estimated 2.0 cubic feet per second and is the headwaters of Spillerberg Creek. Fish populations include muskellunge, largemouth bass, pumpkinseeds, perch, bluegills, black crappies, rock bass, white suckers, and common shiners. Bottom types are mostly sand with some gravel and numerous boulders along the lake edge. The shore vegetation is mostly white spruce with some birch and tag alder, while the aquatic vegetation consists of bulrushes, cattails, water lilies, and pondweeds. Waterfowl use is mostly limited to nesting by wood ducks. Public frontage amounts to .28 miles of Chequamegon National Forest Land on the north shore where an access with parking facilities is available to the public. Private development consists of one cottage.

Summit Lake, T43N, R2W, Sections 22, 23
Surface Acres = 91.4, Maximum Depth = 7 feet, M.P.A. = 19 ppm

An acid, bog lake with an outlet flow of approximately 0.2 cubic feet per second and is the headwaters of Knab Creek. A one foot head rock roller dam on the outlet raises the level of the lake somewhat above normal. The fish population, which is subject to frequent winterkill, consists of largemouth bass, perch, bluegills, black crappies, rock bass, pumpkinseeds, bullheads, and suckers. Except for an area on the north shore that is pastured, the remaining 80 percent of the shoreline is dense black spruce, cedar and balsam bog vegetation. Nesting and migratory duck use and furbearer values are minor. Its private development consists of two cottages and a farm home. It has no public frontage or access road.

Tea Lake, T44N, R4W, Section 18
Surface Acres = 50.0, Maximum Depth = 42 feet, M.P.A. = 22 ppm, Secchi Disk = 8 feet

A soft water, drainage lake having a broad, low gradient outlet stream flowing northwest into Whiskey Creek a quarter of a mile away. The outlet flow is difficult to estimate but is normally about 3.0 cubic feet per second. The most common fish species are walleyes and white suckers, however, perch and pumpkinseeds are present. There is a hard littoral bottom of mostly sand with areas of gravel and rock. A margin of tag alder and leatherleaf borders the immediate lake edge while the vegetation beyond this is made up of birch, maple and spruce. Aquatic vegetation is scarce but it includes species of bulrushes, iris, yellow water lily and coontail. Waterfowl and furbearer use is minor. The lake is accessible only by private access. Development consists of eight cottages. Public frontage amounts to 0.05 miles of Chequamegon National Forest Land on the south shore.

Three Lake, T44N, R4W, Section 3
Surface Acres = 63.2, Maximum Depth = 14 feet, M.P.A. = 17 ppm, Secchi Disk = 10 feet

A soft water, drainage impoundment and an intermittent feeder to Spring Brook. The outlet control structure with its eleven foot head is owned by the U. S. Forest Service. It is a drop log structure with an earthern dike. The lake has an occasional partial winterkill and its fish population consists of largemouth bass, perch, pumpkinseeds, white suckers, golden shiners and mudminnows. Slow growing panfish are a problem to its management and tentative plans for chemical rehabilitation are being considered. About 80 percent of the littoral bottom type is muck with the remainder being sand and gravel areas. Aquatic vegetation has moderate density with coontail, yellow water lily and bulrushes being the most common. Lakeshore vegetation consists of aspen, birch, white spruce and balsam. Waterfowl and furbearers are not significant. The entire lakeshore of 2.24 miles is in Chequamegon National Forest Land ownership and a public campground and access road is maintained by the forest service. There is no private development.

Torrey Lake, T43N, R2W, Section 33
Surface Acres = 28.9, Maximum Depth = 31 feet, M.P.A. = 12 ppm

An acid, bog lake having an intermittent outlet to the northeast through a bog to Gordon Lake. The fish population consists of muskellunge, largemouth bass, black crappies, bluegills, pumpkinseeds, bullheads, and white suckers. Slow growing panfish is a management problem. About ten percent of the littoral lake bottom is sand while the rest is muck bottom along the cedar and black spruce bog that surrounds most of the lake. It is accessible only by private access on the east side of the lake as there is no public frontage. Private development consists of one resort and three cottages. Waterfowl and furbearer use is minor.

Trout Lake, T42N, R1W, Section 7
Surface Acres = 4.8, Maximum Depth = 28 feet, M.P.A. = 8 ppm, Secchi Disk = 13 feet

An acid, bog lake, landlocked and managed as a brook trout lake. It was chemically rehabilitated to remove the stunted panfish during 1958. It has subsequently had annual maintenance stocking of trout. The entire shoreline is muck bottomed bog with vegetation of tamarack, leatherleaf, and andromeda. Waterfowl and furbearer use is insignificant except for some fall migratory waterfowl hunting. The lake has no private development and public access is by town road easement on the east shore.

Twin Lakes-East, T44N, R2W, Sections 13, 24
Surface Acres = 27.2, Maximum Depth = 26 feet, M.P.A. = 13 ppm, Secchi Disk = 4 feet

A soft water, seepage lake with a short, navigable connecting stream channel to Twin Lake-West. The normal outlet flow is estimated to be 0.3 cubic feet per second normally. Its fish population consists of largemouth bass, perch, bluegills, black crappies, pumpkinseeds, white suckers, common shiners, and golden shiners. Slow growing panfish are a problem to its management. About 70 percent of the lakeshore bottom is muck with the remainder being mostly gravel with some areas of sand. Shore vegetation is 40 percent bog on the west shore and the east shore. The intermediate areas have mixed upland hardwood and conifer. Aquatic vegetation is scarce except for a narrow margin of water lilies, water shield and sedge along the lake edge. Nesting and migratory waterfowl use is light and muskrat and beaver use is insignificant. It is accessible only by the connecting channel to Twin Lake-West and there is no public frontage or private development.

Twin Lakes-West, T44N, R2W, Sections 23, 24
Surface Acres = 62.1, Maximum Depth = 12 feet, M.P.A. = 11 ppm, Secchi Disk = 3 feet

An acid, bog lake having an outlet flow to the northwest to Eureka Lake. The estimated flow between the lakes is normally about 0.5 cubic feet per second. There is also a navigable inlet channel from Twin Lake-East. The fish population consists of largemouth bass, perch, bluegills, black crappies, pumpkinseeds, white suckers, common shiners, and golden shiners. Slow growing panfish is a management problem. About 80 percent of the shoreline has bog vegetation of black spruce, tamarack, bog birch, red maple and white pine. The remainder is upland hardwood with scattered Norway pine. Aquatic vegetation is sparse with the exception of a narrow margin of yellow water lily, water shield and sedge along the lake edge. Waterfowl use is light to moderate and there is no significant muskrat or beaver use. It is accessible only by private access and it has no public frontage or private development.

Upper Clam Lake, T42, 43N, R4W, Sections 6, 31, 32
Surface Acres = 164.6, Maximum Depth = 20 feet, M.P.A. = 44 ppm, Secchi Disk = 5 feet

A soft water, drainage lake on the West Fork of the Chippewa River. It has a one foot high rock roller dam on the outlet, and its estimated normal outlet flow is 8.0 cubic feet per second. The fish population consists of walleyes, muskellunge, largemouth bass, perch, bluegills, black crappies, rock bass, pumpkinseeds, white suckers, redhorse, and golden shiners. Lakeshore vegetation is upland hardwood and conifer. Most of the littoral lake bottom area is sand and gravel. It has moderate and varied aquatic vegetation growth. Its waterfowl value is moderate with some use by migratory birds and nesting puddle ducks and loons. Muskrat and beaver use is light. Private development consists of one resort and boat rental place and nineteen cottages. The only public frontage is four access plats, one of which is developed for boat landing and is located on the west shore.

West Twin Lake, T43N, R4W, Section 21
Surface Acres = 44.0, Maximum Depth = 20 feet, M.P.A. = 13 ppm, Secchi Disk = 5 feet

An acid, bog lake, landlocked and surrounded almost entirely by a cedar - tamarack bog. The fish population consists of largemouth bass, perch, bluegills, and rock bass. Its waterfowl use is limited to a few migratory birds and nesting wood ducks. Furbearer use is insignificant. It is accessible on the east at the only point of high ground on the lake and .88 miles of lakeshore is in Chequamegon National Forest Land ownership. It has no private development.

White River Flowage, T46N, R4W, Section 6
Surface Acres = 47.4, Maximum Depth = 26 feet, M.P.A. = 86 ppm, Secchi Disk = 2 feet

A hard water, drainage impoundment on the White River. Its normal outlet flow at the fifty percent level was estimated to be 234.0 cubic feet per second. The forty-nine foot water control structure on the outlet is operated by the Lake Superior District Power Company. The fish population consists of northern pike, largemouth bass, rock bass, pumpkinseeds, bluegills, and white suckers. Occasionally, however, brook and brown trout are also caught as they move down from the headwaters region of the river. Bottom type is 90 percent red clay and 10 percent boulder and the resulting excessive turbidity affects the water quality adversely. Lakeshore vegetation is aspen, red pine, and white pine. Aquatic vegetation is quite dense with stands of bulrushes, cattail, and sedge, and beds of potomegeton species near the inlet. Its waterfowl use is limited mainly to migratory birds and other wildlife value is minor. It is accessible by public boat landing from County Highway "C" and it has no other public frontage or private development.

Wolf Lake, T43N, R1W, Section 18
Surface Acres = 5.4, Maximum Depth = 17 feet, M.P.A. = 6 ppm

An acid, bog lake, landlocked, and surrounded by vegetation of white cedar, black spruce, bog birch, and tag alder swamp mixed with the other bog vegetation of Labrador tea, leatherleaf and sphagnum moss. It is entirely muck bottomed and aquatic vegetation is sparse. The fish population consists of perch, bluegills, and white suckers. Migratory waterfowl and duck use is minor as well as furbearer use being insignificant. It is a wilderness type lake and the entire surrounding lakeshore is in Ashland County Forest Land ownership. It has no private development.

Woodtick Lake, T43N, R4W, Section 27
Surface Acres = 11.7, Maximum Depth = 5 feet, M.P.A. = 22 ppm, Secchi Disk = 3 feet

An acid, bog lake situated on the headwaters of the Torch River above Deadhorse Slough. It has a small outlet flow of 0.1 cubic feet per second normally. Surrounding lakeshore vegetation is composed of mostly leatherleaf bog with some fresh meadow areas. It is entirely muck bottomed. Its fish population consists mainly of minnows, however, perch and pumpkinseeds, are also present. An annual winter fish kill is a management problem. It is a wilderness type lake having no private development or access road and the entire lakeshore is in Chequamegon Forest ownership. Waterfowl use by nesting mallards, black ducks and blue-winged teal is rather extensive. Beaver are present and a significant number of muskrats utilize the lake and its surrounding wetlands area.

Zielke Lake, T43N, R2W, Section 28
Surface Acres = 21.2, Maximum Depth = 10 feet, M.P.A. = 13 ppm, Secchi Disk = 2 feet

A soft water, drainage lake having an outlet flow of an estimated 8.0 cubic feet per second to adjacent Gordon Lake. The two inlet feeder streams to the north are minnow streams while the lake itself has a population of muskellunge, walleye, largemouth bass, perch, black crappies, rock bass, white suckers and trout perch. The entire littoral lake bottom is hard sand and gravel. Most of the shore vegetation is tag alder - shrub swamp. Its wildlife use is limited to a few nesting puddle ducks and occasionally other migratory waterfowl. It is accessible from the town road bridge separating it from Gordon Lake and its private development consists of one cottage. There is no other public frontage on the lake other than the town road.

Inland Waters

Unnamed Lakes

The description of each of the following is presented in tabular form for quick reference. Locations of these lakes can be seen on accompanying maps.

T41N, R1E

Section 12-(Forty #3)
Soft water, seepage lake
Acres = 0.4
Maximum depth = 3 feet
M.P.A. = 12 ppm
Landlocked
Winterkill, fluctuating water levels
Fishery: none
Game: duck nesting
Access: none, wilderness
Public frontage: none

17-(1)
Soft water, drainage impoundment
Acres = 6.0
Maximum depth = 10 feet
M.P.A. = 40 ppm
Rapid Creek outlet flow estimate = 4.0 cfs
Dam height = 6 feet
Fishery: private fish hatchery lic. #331
Game: duck nesting
Access: none
Public frontage: none

21-(6)
Acid, bog lake
Acres = 0.4
Maximum depth = 9 feet
M.P.A. = 10 ppm
Landlocked
Winterkill
Fishery: minnows
Game: none observed
Access: none, wilderness
Public frontage: none

25-(11)
Acid, bog lake
Acres = 1.9
Maximum depth = 11 feet
M.P.A. = 6 ppm
Landlocked
Winterkill
Fishery: minnows
Game: none observed
Access: no improved road, wilderness
Public frontage: 0.20 miles WCD Hoffman Lake Wildlife Area

T41N, R1W

20-(12)

Spring pond
Acres = 5.6
Maximum depth = 6 feet
M.P.A. = 99 ppm
Outlet feeder to Spiller Creek estimated normal flow of 0.8 cfs; dam height of 3 feet
Fishery: private fish hatchery (lic. #1021) from 1958 to 1965, cancelled.
Game: muskrats
Other use: stock watering
Public frontage: none

33-(2)
Acid, bog lake
Acres = 6.2
Maximum depth = 10 feet
M.P.A. = 35 ppm
Landlocked
Winterkill
Fishery: minnows
Game: duck nesting
Access: none, wilderness
Public frontage: none

T41N, R2W

9-(1)
Soft water, seepage lake
Acres = 1.3
Maximum depth = 3 feet
M.P.A. = 7 ppm
Landlocked
Winterkill
Fishery: none
Game: duck nesting muskrats
Access: none
Public access: none

14-(10)
Acid, bog lake
Acres = 1.2
Maximum depth = 22 feet
M.P.A. = 8 ppm
Landlocked
Winterkill
Fishery: panfish
Game: duck nesting
Access: none, wilderness
Public frontage: none

15-(4)
Acid, bog lake
Acres = 1.1
Maximum depth = 12 feet
M.P.A. = 10 ppm
Landlocked
Winterkill
Fishery: panfish
Game: duck nesting
Access: none, wilderness
Public frontage: none

T41N, R3W

21-(10)
Spring pond
Acres = 0.4
Maximum depth = 2 feet
M.P.A. = 85 ppm
Estimated total normal outlet flows of 0.3 cfs; springs consist of 2 ponds of Hay Creek
Damage from beaver flowage flooding extensive
Fishery: minnows
Game: duck nesting
Access: no improved roads, wilderness
Public frontage: 0.09 miles Chequamegon National Forest

T41N, R4W

30-(1)
Acid, bog lake
Acres = 18.6
Maximum depth = 5 feet
M.P.A. = 10 ppm
Estimated normal outlet flow of 2.2 cfs of feeder to Fishtrap Creek
Winterkill
Fishery: minnows
Game: duck nesting, occasionally beaver
Access: no improved roads, wilderness
Public frontage: 1.25 miles Chequamegon National Forest

T41N, R4W - continued

30-(12)
Soft water, drainage lake
Acres = 4.9
Maximum depth = 2 feet
M.P.A. = 10 ppm
Estimated normal flow of Fishtrap Creek at lake outlet 1.0 cfs
Fishery: minnows
Game: duck nesting, muskrats, occasionally beaver
Access: no improved roads, wilderness
Public frontage: 0.60 miles Chequamegon National Forest

T42N, R1E

10-(11)
Acid, bog lake
Acres = 0.9
Maximum depth = 16 feet
M.P.A. = 12 ppm
Landlocked
Winterkill
Fishery: none
Game: none
Access: none, wilderness
Public frontage: none

13-(9)
Acid, bog lake
Acres = 4.3
Maximum depth = 10 feet
M.P.A. = 12 ppm
Estimated normal outlet flow to Swamp Creek 0.3 cfs
Winterkill
Fishery: minnows
Game: duck nesting
Access: none, wilderness
Public frontage: none

19-(6)
Hard water, drainage impoundment
Acres = 2.0
Maximum depth = 11 feet
M.P.A. = 53 ppm
Estimated outlet feeder flow to East Fork Chippewa River 0.5 cfs. Water control structure height 2 feet, variable head to 9 feet
A dredged and impounded spring pond
Fishery: licensed private fish hatchery #473
Game: none
Access: none
Public frontage: none

T42N, R1W

7-(13)
Acid, bog lake
Acres = 1.2
Maximum depth = 25 feet
M.P.A. = 5 ppm
Landlocked
Fishery: minnows; panfish present
Game: none
Access: none, wilderness
Public frontage: none

8-(2)
Acid, bog lake
Acres = 1.4
Maximum depth = 15 feet
M.P.A. = 9 ppm
Landlocked
Winterkill
Fishery: minnows
Game: none
Access: none, wilderness
Public frontage: none

13-(2)
Spring pond
Acres = 2.1
Maximum depth = 3 feet
M.P.A. = 86 ppm
Outlet stream, estimated normal flow of 3.0 cfs to East Fork Chippewa River
Fishery: minnows
Game: duck nesting
Access: no improved road; water access, wilderness
Public frontage: 0.88 Ashland County Forest Land

T42N, R1W - continued

13-(3)
Spring pond
Acres = 2.2
Maximum depth = 1 foot
M.P.A. = 64 ppm
Outlet stream, estimated normal flow of 3.5 cfs to East Fork Chippewa River
Fishery: minnows
Game: duck nesting
Access: no improved road; water access, wilderness
Public frontage: 0.66 miles Ashland County Forest Land

T42N, R2W

19-(2)
Acid, bog lake
Acres = 0.5
Maximum depth = 15 feet
M.P.A. = 44 ppm
Landlocked
Winterkill
Fishery: minnows
Game: duck nesting
Access: none, wilderness
Public frontage: none

32-(13)
Acid, bog lake
Acres = 0.3
Maximum depth = 5 feet
M.P.A. = 12 ppm
Landlocked
Winterkill
Fishery: none
Game: duck nesting
Access: none, wilderness
Public frontage: none

36-(5)
Spring pond
Acres = 0.7
Maximum depth = 1 foot
M.P.A. = 63 ppm
Outlet stream, estimated normal flow 0.4 cfs to Dorns Creek
Fishery: brook trout
Game: duck nesting
Access: none
Public frontage: none

T42N, R4W

7-(13)
Spring pond
Acres = 0.1
Maximum depth = 1 foot
M.P.A. = 35 ppm
Outlet feeder stream to Torch River with estimated normal flow of 0.3 cfs
Fishery: brook trout
Game: duck nesting, past beaver use
Access: no improved road, wilderness
Public frontage: 0.25 miles Chequamegon National Forest

17-(4)

Soft water, drainage impoundment
Acres = 15.9
Maximum depth = 11 feet
M.P.A. = 25 ppm
Outlet stream to Torch River with an estimated normal flow of 0.2 cfs. Roadway impounds lake with a six foot height head.
Fishery: largemouth bass, panfish
Game: duck nesting
Access: unimproved site off forest road
Public frontage: 1.04 miles of Chequamegon National Forest

27-(12)

Acid, bog lake
Acres = 3.4
Maximum depth = 20 feet
M.P.A. = 16 ppm
Landlocked
Fishery: panfish
Game: duck nesting
Access: no improved road, wilderness
Public frontage: 0.28 miles of Chequamegon National Forest and State of Wisconsin

29-(2)
Acid, bog lake
Acres = 2.3
Maximum depth = 9 feet
M.P.A. = 5 ppm
Landlocked
Winterkill
Fishery: minnows
Game: duck nesting
Access: no improved roads, wilderness
Public frontage: 0.28 miles Chequamegon National Forest

T43N, R1W

5-(3) "Mack" Lake
Soft water, seepage lake
Acres = 10.2
Maximum depth = 5 feet
M.P.A. = 10 ppm
Landlocked
Winterkill
Fishery: minnows
Game: duck nesting
Access: none
Public frontage: none
Private development: one cottage

15-(6)
Soft water, seepage lake
Acres = 1.1
Maximum depth = 3 feet
M.P.A. = 12 ppm
Landlocked
Winterkill
Fishery: none
Game: duck nesting
Access: no improved road, wilderness
Public frontage: 0.15 miles Ashland County Forest

16-(1)
Spring pond
Acres = 0.5
Maximum depth = 5 feet
M.P.A. = 75 ppm
Outlet feeder stream to Magee Creek with estimated normal flow of 2.0 cfs
Fishery: brook trout
Game: duck nesting, past beaver use
Access: no improved road, wilderness
Public frontage: 0.34 miles of Ashland County Forest Land

22-(7)
Soft water seepage
Acres = 0.6
Maximum depth = 2 feet
M.P.A. = 14 ppm
Landlocked
Winterkill
Fishery: none
Game: duck nesting
Access: none, wilderness
Public frontage: none

24-(2)
Spring pond
Acres = 0.5
Maximum depth = 1 foot
M.P.A. = 58 ppm
Outlet stream to Augustine Creek with estimated normal flow of 0.3 cfs
Fishery: brook trout
Game: duck nesting, past beaver use
Access: no improved road, wilderness
Public frontage: 0.15 miles Ashland County Forest Land

T43N, R2W

12-(8)
Soft water, drainage lake
Acres = 0.7
Maximum depth = 8 feet
M.P.A. = 18 ppm
Winterkill
Outlet flow of feeder to Dry Lake estimated at 0.4 cfs normally
Fishery: minnows; perch, largemouth bass also present
Game: duck nesting
Access: no improved road, wilderness
Public frontage = 0.13 miles Chequamegon National Forest

15-(7)
Acid, bog lake
Acres = 0.3
Maximum depth = 18 feet
M.P.A. = 6 ppm
Landlocked
Winterkill
Fishery: none
Game: none
Access: no improved road, wilderness
Public frontage: 0.13 miles Chequamegon National Forest

35-(12)
Acid, bog lake
Acres = 1.8
Maximum depth = 16 feet
M.P.A. = 15 ppm
Landlocked
Fishery: panfish (slow-growing)
Game: duck nesting
Access: none
Public frontage: none

T43N, R3W

12-(4)
Acid, bog lake
Acres = 0.8
Maximum depth = 6 feet
M.P.A. = 6 ppm
Landlocked
Winterkill
Fishery: none
Game: none observed
Access: none
Public frontage: none

T43N, R4W

4-(14)
Acid, bog lake
Acres = 2.8
Maximum depth = 9 feet
M.P.A. = 18 ppm
Outlet feeder stream flow to Spider Lake estimated at 1.2 cfs normally
Fishery: largemouth bass, panfish
Game: duck nesting
Access: none, wilderness
Public frontage: none

18-(12)
Acid, bog lake
Acres = 0.4
Maximum depth = 8 feet
M.P.A. = 6 ppm
Landlocked
Winterkill
Fishery: none
Game: none observed
Access: none, wilderness
Public frontage: none

18-(15)
Acid, bog lake
Acres = 0.3
Maximum depth = 4 feet
M.P.A. = 5 ppm
Landlocked
Winterkill
Fishery: none
Game: none observed
Access: none, wilderness
Public frontage: 0.09 miles of Chequamegon National Forest

19-(6)
Acid, bog lake
Acres = 3.0
Maximum depth = 2 feet
M.P.A. = 8 ppm
Landlocked
Winterkill
Fishery: none
Game: duck nesting
Access: no improved road
Public frontage: 0.32 miles Chequamegon National Forest

32-(7)
Hardwater, drainage impoundment
Acres = 4.2
Maximum depth = 6 feet
M.P.A. = 50 ppm
Estimated normal outlet flow West Fork Chippewa River of 7.0 cfs
Fishery: panfish
Game: duck and loon nesting, beaver
Access: no improved road
Public frontage: 0.28 miles Chequamegon National Forest
Private development: 3 cottages

T44N, R2W

17-(1)
Hard water, drainage impoundment
Acres = 0.5
Maximum depth = 8 feet
M.P.A. = 71 ppm
Outlet stream, City Creek, estimated normal flow of 2.0 cfs; concrete spillway control structure head of 9 feet, flumed for once supplying water to Mellen.
Fishery: brook trout
Game: none observed
Access: unimproved site off town road
Public frontage: none

T44N, R2W-continued

22-(16 b)
Acid, bog lake
Acres = 2.8
Maximum depth = 27 feet
M.P.A. = 9 ppm
Landlocked
Fishery: panfish
Game: none observed
Access: trail
Public frontage: 0.24 miles Ashland County Forest Land

22-(16 d)
Acid, bog lake
Acres = 0.4
Maximum depth = 21 feet
M.P.A. = 8 ppm
Landlocked
Winterkill
Fishery: minnows
Game: none observed
Access: unimproved trail, wilderness
Public frontage: 0.10 miles of Ashland County Forest Land

23-(3)
Acid, bog lake
Acres = 0.4
Maximum depth = 15 feet
M.P.A. = 8 ppm
Landlocked
Winterkill
Fishery: none
Game: none observed
Access: none, wilderness
Public frontage: none

24-(14)
Acid, bog lake
Acres = 1.9
Maximum depth = 8 feet
M.P.A. = 9 ppm
Intermittent outlet to Caroline Lake
Winterkill
Fishery: minnows
Game: none observed
Access: none, wilderness
Public frontage: none

26-(6)
Acid, bog lake
Acres = 0.5
Maximum depth = 38 feet
M.P.A. = 17 ppm
Landlocked
Winterkill
Fishery: minnows
Game: none observed
Access: unimproved trail, wilderness
Public frontage: 0.12 miles Ashland County Forest Land

T44N, R3W

1-(14)
Soft water, seepage lake
Acres = 2.0
Maximum depth = 8 feet
M.P.A. = 15 ppm
Intermittent outlet to the Bad River
Winterkill
Fishery: panfish
Game: duck nesting
Access: none
Public frontage: none

6-(9)
Acid, bog lake
Acres = 2.9
Maximum depth = 9 feet
M.P.A. = 26 ppm
Landlocked
Winterkill
Fishery: largemouth bass, panfish
Game: none observed
Access: none
Public frontage: none
Private development: one dwelling

T44N, R4W

5-(11)
Acid, bog lake
Acres = 0.7
Maximum depth = 14 feet
M.P.A. = 31 ppm
Landlocked
Winterkill
Fishery: none
Game: none observed
Access: no improved road, wilderness
Public frontage: 0.13 miles of Chequamegon National Forest

T44N, R4W-continued

20-(13)
Acid, bog lake
Acres = 2.1
Maximum depth = 15 feet
M.P.A. = 4 ppm
Landlocked
Winterkill
Fishery: minnows
Game: none observed
Access: no improved road, wilderness
Public frontage: 0.24 miles of Chequamegon National Forest

25-(16)
Acid, bog lake
Acres = 3.5
Maximum depth = 11 feet
M.P.A. = 19 ppm
Intermittent outlet feeder to McCarthy Creek
Winterkill
Fishery: minnows
Game: duck nesting
Access: no improved road, wilderness
Public frontage: 0.30 miles of Chequamegon National Forest

T45N, R2W

7-(14)
Soft water, seepage lake
Acres = 1.3
Maximum depth = 3 feet
M.P.A. = 14 ppm
Landlocked
Winterkill
Fishery: none observed
Game: duck nesting, muskrat
Access: none, wilderness
Public frontage: none

18-(1)
Acid, bog lake
Acres = 2.3
Maximum depth = 17 feet
M.P.A. = 11 ppm
Landlocked
Fishery: panfish
Game: duck nesting
Access: none, wilderness
Public frontage: none

18-(14)
Acid, bog lake
Acres = 9.9
Maximum depth = 33 feet
M.P.A. = 14 ppm
Landlocked
Fishery: panfish
Game: duck nesting
Access: none, wilderness
Public frontage: none

T45N, R4W

18-(16)
Soft water, seepage lake
Acres = 9.7
Maximum depth = 7 feet
M.P.A. = 10 ppm
Landlocked
Winterkill
Fishery: minnows
Game: duck nesting
Access: none
Public frontage: none

T46N, R3W

24-(14)
Hard water, seepage lake
Acres = 2.2
Maximum depth = 3 feet
M.P.A. = 114 ppm
Intermittent flow from Bad River
Winterkill
Fishery: none
Game: duck nesting
Access: none, wilderness
Public frontage: none

24-(15)
Hard water, seepage lake
Acres = 1.8
Maximum depth = 5 feet
M.P.A. = 119 ppm
Intermittent flow from Bad River
Winterkill
Fishery: minnows
Game: duck nesting
Access: none, wilderness
Public frontage: none

T46N, R3W-continued

35-(8)
Hard water, seepage lake
Acres = 5.2
Maximum depth = 6 feet
M.P.A. = 102 ppm
Intermittent flow from Marengo River
Winterkill
Fishery: minnows
Game: duck nesting
Access: none, wilderness
Public frontage: none

T46N, R4W

26-(4)
Hard water, seepage lake
Acres = 1.0
Maximum depth = 3 feet
M.P.A. = 85 ppm
Intermittent flow from Marengo River
Winterkill
Fishery: minnows
Game: duck nesting
Access: none
Public frontage: none

T47N, R3W

1-(12)
Soft water, seepage lake
Acres = 1.9
Maximum depth = 7 feet
M.P.A. = 42 ppm
Intermittent flow from Bad River
Winterkill
Fishery: minnows
Game: duck nesting
Access: no improved road, wilderness
Public frontage: none

12-(9)
Hard water, seepage lake
Acres = 4.6
Maximum depth = 9 feet
M.P.A. = 88 ppm
Intermittent flow from Bad River
Winterkill
Fishery: panfish
Game: duck nesting
Access: none, wilderness
Public frontage: none

12-(12)
Hard water, seepage lake
Acres = 0.7
Maximum depth = 10 feet
M.P.A. = 63 ppm
Intermittent flow from Bad River
Winterkill
Fishery: minnows
Game: duck nesting
Access: none, wilderness
Public frontage: none

13-(7)
Hard water, seepage lake
Acres = 6.9
Maximum depth = 8 feet
M.P.A. = 56 ppm
Intermittent flow from Bad River
Winterkill
Fishery: panfish
Game: duck nesting
Access: none, wilderness
Public frontage: none

14-(12)
Hard water, seepage lake
Acres = 3.2
Maximum depth = 6 feet
M.P.A. = 95 ppm
Intermittent flow from Bad River
Winterkill
Fishery: minnows
Game: duck nesting
Access: none, wilderness
Public frontage: none

14-(13)
Hard water, seepage lake
Acres = 3.2
Maximum depth = 7 feet
M.P.A. = 57 ppm
Intermittent flow from Bad River
Winterkill
Fishery: minnows
Game: duck nesting
Access: none, wilderness
Public frontage: none

T47N, R3W-continued

14-(16)
Hard water, seepage lake
Acres = 3.7
Maximum depth = 9 feet
M.P.A. = 70 ppm
Intermittent flow from Bad River
Winterkill
Fishery: minnows
Game: duck nesting
Access: none, wilderness
Public frontage: none

23-(3)
Hard water, seepage lake
Acres = 3.4
Maximum depth = 5 feet
M.P.A. = 119 ppm
Intermittent flow from Bad River
Winterkill
Fishery: minnows
Game: duck nesting
Access: none, wilderness
Public frontage: none

23-(8)
Hard water, seepage lake
Acres = 5.8
Maximum depth = 9 feet
M.P.A. = 62 ppm
Intermittent flow from Bad River
Winterkill
Fishery: panfish
Game: duck nesting
Access: no improved road, wilderness
Public frontage: 0.76 miles Ashland County Land

23-(9)
Hard water, seepage lake
Acres = 2.9
Maximum depth = 7 feet
M.P.A. = 63 ppm
Intermittent flow from Bad River
Winterkill
Fishery: minnows
Game: duck nesting
Access: none, wilderness
Public frontage: none

23-(12)
Hard water, seepage lake
Acres = 1.9
Maximum depth = 5 feet
M.P.A. = 76 ppm
Intermittent flow from Bad River
Winterkill
Fishery: none
Game: duck nesting
Access: none, wilderness
Public frontage: none

23-(15 a)
Hard water, seepage lake
Acres = 4.7
Maximum depth = 8 feet
M.P.A. = 95 ppm
Intermittent flow from Bad River
Winterkill
Fishery: panfish
Game: duck nesting
Access: no improved road, wilderness
Public frontage: 0.68 miles of Ashland County Land

23-(15 b)
Hard water, seepage lake
Acres = 1.5
Maximum depth = 5 feet
M.P.A. = 94 ppm
Intermittent flow from Bad River
Winterkill
Fishery: minnows
Game: duck nesting
Access: no improved road, wilderness
Public frontage: 0.38 miles of Ashland County Land

26-(12)
Soft water, seepage lake
Acres = 10.4
Maximum depth = 19 feet
M.P.A. = 48 ppm
Intermittent outlet to Bad River
Fishery: northern pike, largemouth bass, panfish
Game: duck nesting, beaver
Access: none, wilderness
Public frontage: none

T47N, R4W

6-(9)
Spring pond
Acres = 5.7
Maximum depth = 3 feet
M.P.A. = 113 ppm
Outlet flow estimate 5.0 cfs to Fish Creek, Bayfield County
Fishery: northern pike, panfish; trout occasionally
Game: duck nesting, muskrats
Access: no improved road, water access
Public frontage: 0.56 miles of City of Ashland at Prentice Park

T48N, R2W

18-(1)
Hard water, seepage lake
Acres = 18.9
Maximum depth = 13 feet
M.P.A. = 51 ppm
Landlocked
Fishery: northern pike, largemouth bass, panfish
Game: duck nesting
Access: no improved road, wilderness
Public frontage: -.58 miles of Town of Sanborn land

T48N, R3W

36-(3)
Hard water, seepage lake
Acres = 8.9
Maximum depth = 9 feet
M.P.A. = 72 ppm
Intermittent flow from Bad River
Winterkill, excessive weeds
Fishery: panfish
Game: duck nesting
Access: none
Public frontage: none

T50N, R3W-Madeline Island

13-(3)
Soft water, seepage lake
Acres = 104.6
Maximum depth = 10 feet
M.P.A. = 40 ppm
Normal outlet flow estimate of 0.1 cfs to Lake Superior
Winterkill, excessive weeds and algae
Fishery: northern pike, panfish
Game: duck nesting, muskrat, beaver
Access: improved road
Public frontage: 0.93 miles of State of Wisconsin and Town of La Pointe at town park with campground

T51N, R2W-Madeline Island

35-(7) (Bog Lake)
Acid, bog lake
Acres = 32.1
Maximum depth = 5 feet
M.P.A. = 8 ppm
Normal outlet flow estimate of 0.9 cfs to Lake Superior
Winterkill
Fishery: northern pike, panfish
Game: duck nesting, muskrats, beaver
Access: none
Public frontage: none

T51N, R2W-Stockton Island

1-(4)
Soft water, seepage lake
Acres = 30.4
Maximum depth = 8 feet
M.P.A. = 26 ppm
Intermittent outlet flow to Lake Superior
Winterkill
Fishery: northern pike, panfish
Game: duck nesting, beaver
Access: water access, no improved road, wilderness
Public frontage: 2.45 miles of WCD, Apostle Islands State Forest

T52N, R1W-Outer Island

10-(3)
Alkaline, bog lake
Acres = 35.6
Maximum depth = 6 feet
M.P.A. = 10 ppm
Landlocked; no recent channel to lake
Winterkill
Fishery: northern pike
Game: duck nesting
Access: no improved road, 35 foot portage from Lake Superior by water, wilderness
Public frontage: none

Streams

Augustine Creek, T43N, R1W, Section 13, to T42N, R1W, Section 2
Surface Acres = 18.1, Miles = 6.0, Gradient = 24 feet per mile, M.P.A. = 54 ppm

Originating in Iron County, it flows south through a marshy and forested area into the East Fork of the Chippewa River. Five linear miles of the stream is brook trout water, and is above average in quality for this county. The portion of stream from the county line through sections 13 and 24 is the best section and has good natural reproduction. Strong instream springs and the spring pond in section 24 provide the stream with a cold water habitat. However, extensive beaver damming through part of section 24 downstream to the Augustine Lake Road has deteriorated the stream habitat. The last mile of this portion of the stream has thus become minnow habitat. The small feeder stream entering Augustine Creek in section 25 is also a minnow inhabited stream. The portion of stream from the Augustine Lake Road south to the outlet is medium quality brook trout water and has not suffered the extensive beaver damage of the upper portion. The spring feeder stream in section 36 is also brook trout water while the small feeder in sections 1 and 2, further downstream is bog drainage water and a minnow stream. All but 0.3 miles of Augustine Creek's length flows through Ashland County Forest Land. Two bridges cross the stream and provide access to the lower end. Other than the beaver already mentioned, its wildlife values include nesting mallards, black ducks, blue-winged teal and other migratory ducks in the fall and spring. The predominant stream bank vegetation is tag alder with minor areas of conifer swamp, fresh meadow and hardwood upland. Water color varies from a light brown during periods of normal flow to dark brown during high runoff.

Bad River, T44N, R2W, Section 25, to T48N, R2W, Section 17
Surface Acres = 678.8, Miles = 70.2, Gradient = 14 feet per mile, M.P.A. = 27 ppm

The main drainage stream of the county and also the longest, it originates in Caroline Lake then flows into Lake Superior. The rate of gradient drop varies considerably. The downstream one-third tends to be broad and sluggish with a low gradient. The middle portion, in the Mellen area, is a bedrock and boulder bottomed section of high gradient with rapids and several waterfalls, Copper and Brownstone Falls north of Mellen and two smaller falls in section 23, T44N, R3W. The portion of the stream from its headwaters to Cayuga has a moderate gradient. Above the high gradient rapids in section 31, T45N, R2W above Mellen, there is a water diversion structure which diverts water through a public utility power station of the Lake Superior District Power Company. The flowed area behind the water control structure is not significant enough in size to be termed a flowage. An old reservoir and flowage area just to the west of Mellen once served as water storage for this power plant until it washed out. Other than Caroline Lake at its headwaters and the Bad River Slough adjacent to its outlets, there are no natural lakes directly on the Bad River. A large number of named streams, however, contribute their flow to the river, namely, the White, Potato, Marengo and Tyler Forks Rivers being the main ones.

A variety of fish species inhabit the Bad River. The area from the outlet of Minnie Creek downstream to Cayuga is medium quality trout water containing brook trout, brown trout and a few rainbow trout. The portion from Cayuga downstream to below Copper Falls is poorer quality trout water with the same species present. An occasional migratory rainbow trout is caught downstream to the outlet at Lake Superior. This downstream portion is mainly walleye water but also has muskellunge, northern pike, rock bass, pumpkinseeds, bullheads, black crappies, smallmouth bass and perch.

Bad River-continued

The minnow inhabited portion of the stream is from Caroline Lake downstream to the outlet of Minnie Creek. Generally, the most common rough fish species in the river are white suckers, common shiners and redhorse and incidental species include longnose sucker, burbot, creek chubs, blacknose dace, brook stickleback, mudminnows, longnose dace, stonerollers, and johnny darters. The volume of flow varies considerably due to the drainage origin of its waters. Except for the areas of bedrock, the stream is mostly sand bottomed. The shifting nature of the bottom type in the downstream portion near the lake and the steep clay banks in this area make habitat management difficult. Beaver are present in the headwaters region and muskrat are common to most of the stream. High waterfowl use is evident with the nesting of ducks such as mallards, blacks, blue-winged teal, wood ducks, hooded mergansers and coot observed. Eleven bridges cross the Bad River and accesses are provided at the end of the town road in section 25, T47N, R3W, at the bridge crossing in section 2, T46N, R3W, at a wayside access on Highway 13 south of Mellen, and at a private access site off Highway 2 at Odanah. Camping facilities are provided on the stream at Copper Falls State Park where the scenic portion of the river has become a tourist attraction. The total public frontage on the stream amounts to 42.7 miles of shoreline, the major owners being the Chequamegon National Forest, U. S. Forest Service and the Wisconsin Conservation Department. Other owners are Ashland County Forest, other Ashland County lands, and the towns of Sanborn and Morse. From two miles downstream from the State Park to Lake Superior, the stream flows through the Bad River Indian Reservation. This area of the stream is used for canoeing and, near the lake, outboard motorboat use is common.

Ballou Creek, T44N, R2W, Section 12 to Section 2
Surface Acres = 2.3, Miles = 2.4, Gradient = 40 feet per mile, M.P.A. = 23 ppm

Flowing from Iron County, it is joined by four small spring feeder streams before entering Devils Creek. The Ballou and Devils Creek water system has some of the better brook trout water of the county. Along with the abundant naturally producing brook trout, the most forage fish are creek chubs, mudminnows and sculpins with blacknose dace, black crappies and pumpkinseeds present in lesser numbers. It has a relatively high gradient and mostly hard sand, gravel and rocky bottom. Good natural reproduction is evident in the main stream and its feeders. Much of the upper portion of the stream has a dense tag alder swamp bordering it while the lower section is hardwood and conifer upland. Beaver are present and with the exception of a few migratory puddle ducks, waterfowl values are minor. This stream is crossed by one town bridge and there is no other public frontage.

Bay City Creek, T47N, R4W, Section 17, to T48N, R4W, Section 33
Surface Acres = 5.2, Miles = 4.3, Gradient = 27 feet per mile, M.P.A. = 182 ppm

A warm water, forage minnow drainage stream flowing northeasterly through the City of Ashland into Lake Superior. The water is usually turbid and it has an unstable bottom of silt and sand. Its upper watershed is mainly open agricultural land which allows rapid runoff causing extensive water level fluctuations. Waterfowl and furbearer use is insignificant. There is a considerable amount of private development near the outlet section and it is crossed by four road bridges. There is no other public frontage.

Bear Creek, T43N, R1W, Section 28, to Section 32
Surface Acres = 0.7, Miles = 1.1, Gradient = 14 feet per mile, M.P.A. = 25 ppm

A small, spring feeder to the East Fork of the Chippewa River northeast of Glidden. Brook trout are common, but due to the stream's small size it cannot support a great deal of fishing pressure. The immediate stream bank vegetation is shrub swamp and marsh. Much of the stream is in a deteriorated physical condition probably due to old beaver flowages. Trout reproduction is limited by unstable bottom conditions. It has no public frontage other than County Highway "N" which crosses it.

Beartrap Creek, T47N, R4W, Section 13, to T48N, R3W, Section 22
Surface Acres = 14.5, Miles = 10.0, Gradient = 8 feet per mile, M.P.A. = 86 ppm

A warm water drainage stream flowing into the Kakagon Slough. It is principally a minnow inhabited stream with creek chubs and trout-perch; however, northern pike are also present. Because of rapid runoff from the agricultural lands surrounding its headwaters, Beartrap Creek has extreme fluctuations in water levels. The bordering wetlands near its outlet provide some habitat for nesting ducks and migratory birds. Four road bridges cross the stream and Ashland County owns 0.8 miles of the stream's frontage. A private access is located at the last town road bridge that separates the stream from the slough area. Beaver are present in the broad, sluggish portion of the stream about a mile upstream from this town road.

Beaver Creek, T41N, R2W, Section 36
Surface Acres = 0.5, Miles = 0.6, Gradient = 12 feet per mile, M.P.A. = 67 ppm

A broad, low gradient minnow stream, flowing into Price County to Butternut Creek. Movement of water is slow and the stream exhibits evidence of heavy beaver use in the past. It is bordered by an extensive tag alder swamp and fresh meadow. Along with the beaver and muskrats, nesting puddle ducks are common as well as a few other species of migratory ducks. A town road crosses the stream on the county line and there is no other public frontage on the stream.

Billy Creek, T45N, R3W, Section 2, to T46N, R3W, Section 35
Surface Acres = 0.2, Miles = 0.4, Gradient = 37 feet per mile

A small, spring feeder stream to the Marengo River. It has a small naturally reproducing trout population composed of brook, brown and rainbow trout. Its watershed and stream bank vegetation is mostly upland hardwood. Its intermittent feeders are located in open agricultural land. Other than its fishery, wildlife values are minor. It has no public frontage or access road.

Black Creek, T41N, R4W, Section 11 to Section 4
Surface Acres = 1.9, Miles = 3.1, Gradient = 9 feet per mile, M.P.A. = 18 ppm

A small, warm water drainage stream flowing from a large spruce bog through a sedge, tag alder and willow swamp into Moose River. Its main fish population is forage fish and the species present include white suckers, blacknose dace, mudminnows, brook sticklebacks and creek chubs. A few puddle ducks nest along the creek and there is extensive use by beaver and muskrats. There is a total of 5.6 miles of public frontage, which includes some State of Wisconsin land although the major owner is Chequamegon National Forest. One road bridge crosses the stream. The several small feeders entering Black Creek are also minnow waters.

Brunsweiller River, T43N, R4W, Section 6, to T46N, R3W, Section 32
Surface Acres = 53.5, Miles = 22.1, Gradient = 41 feet per mile, M.P.A. = 26 ppm

Draining the west central section of the county, the Brunsweiller River has several natural glacial lakes on its course and feeders. Its principal water tributaries are Spider Creek, Hell Hole Creek, Camp Six Creek and several other unnamed feeder streams. Trout streams flowing into the river are McCarthy Creek, Spring Brook, Trout Brook and an unnamed feeder in section 36, T45N, R4W. From its origin west of Spider and Moquah Lakes, the Brunsweiller River is a minnow stream and continues to be that as it flows through Moquah Lake, Mineral Lake and Beaver Dam Lake. Below the outlet of Beaver Dam Lake it picks up spring water and becomes a medium quality brook, brown and rainbow trout stream down to the outlet of Spring Brook. From this point to Highway 13 the trout habitat becomes deteriorated due to unstable bottom conditions and erosion in the red clay area. A few migratory rainbow trout are present and caught occasionally between Highway 13 and its outlet to the Marengo River. The Brunsweiller River is somewhat similar to the Bad River in that it begins as a drainage stream to several warm water lakes at its headwaters, then changes to a rocky hard-bottomed, high gradient stream in its midsection and finally to a warmer water low gradient habitat near its outlet. Extremes in water level fluctuations make habitat management difficult. Other than the trout, the warm water species present include muskellunge, smallmouth bass, perch, bluegills, black crappies, rock bass, pumpkinseeds, white suckers, redhorse, common shiners, redbelly dace, creek chubs, blacknose dace, mudminnows, johnny darters, brook sticklebacks, sculpin, longnose dace and logperch. Muskrats are common to parts of it while beaver are absent in most portions. Its waterfowl value is limited to a few nesting puddle ducks and minor use by migratory birds. About 11.7 miles, or one-third of the stream bank is in Chequamegon National Forest ownership. Six roads cross the stream, however, sections of five miles or more in length are not easily accessible by road. Only a small part of this stream is canoeable because of the rugged nature of the underlying terrain; however, most of the stream has a high scenic value.

Brush Creek, T43N, R3W, Section 12 to Section 6
Surface Acres = 4.1, Miles = 5.7, Gradient = 16 feet per mile, M.P.A. = 9 ppm

A medium quality brook trout stream flowing into the Iron River. As its name implies, the stream banks have a dense cover of tag alder. Extremes in water level fluctuations are a management problem. Beaver are common as well as a few nesting puddle ducks and migratory birds. It is accessible from one road bridge and most of the shoreline, 5.1 miles of its 5.7 miles of length, is in Chequamegon National Forest and State of Wisconsin ownership. The three small feeders to Brush Creek also have brook trout present in them.

Butternut Creek, T42N, R1E, Section 20. to T41N, R1W, Section 33
Surface Acres = 27.4, Miles = 11.9, Gradient = 10 feet per mile, M.P.A. = 69 ppm

Starting from spring water sources this stream flows through Little Butternut Lake and Butternut Lake, into Price County and the Flambeau River. It gradually changes character from cold water habitat to a warm water drainage stream before leaving the county. The headwaters area to Little Butternut Lake is medium quality brook trout water, except for the feeder stream from section 32, T42N, R1E. Although a few brook trout are present in this small feeder, persistent use by beaver has greatly deteriorated the habitat for trout so that it is now considered a minnow stream. This situation is also true for the feeder streams in section 1, T41N, R1W and section 10, T41N, R1W.

Butternut Creek-continued

Butternut Creek and its feeders downstream from County Highway "F" are also minnow waters while the portion of stream above Highway "F" to Little Butternut Lake is low quality brown and brook trout water. Hildebrandt Creek located in section 35 and 2, is a good quality brook trout stream. There are two private fish hatchery licenses issued on ponds located on the Butternut Creek watershed in section 3 and 12, T41N, R1W. Its wildlife values consist of muskrat, beaver, nesting of mallards, black ducks, blue-winged teal, wood ducks and hooded mergansers and other migratory waterfowl use is high for the relatively small size of the stream. There is no public frontage other than the six road bridges crossing the stream.

Camp Fifteen Creek, T41N, R3W, Section 24 to Section 22
Surface Acres = 1.1, Miles = 1.5, Gradient = 50 feet per mile, M.P.A. = 51 ppm

A small, medium quality brook trout stream flowing into the East Fork of the Chippewa River. Stream bank cover is mostly hardwood and conifer upland with tag alder and marsh edges on its headwaters. Beaver are not presently active here and its waterfowl value is minor due to the stream's small size. One Forest Service road crosses the stream, and the entire stream length is in Chequamegon National Forest Land ownership.

Camp Four Creek, T45N, R2W, Section 13 to 10
Surface Acres = 1.4, Miles = 1.9, Gradient = 36 feet per mile, M.P.A. = 41 ppm

A small but good quality trout stream flowing into the Tyler Forks River. Brook trout are common to the stream and a few brown trout are present. Although Camp Four Creek is small in size, it provides a good trout reproduction area for the Tyler Forks River. A licensed private hatchery pond is located on the intermittent headwaters. Most of the stream bank is pastured upland hardwood with some tag alder stream edge cover. Three bridges cross the stream and it has no other public frontage. Waterfowl and furbearer use is minor.

Camp Fourteen Creek, T41N, R3W, Section 34 to Section 21
Surface Acres = 1.4, Miles = 2.3, Gradient = 37 feet per mile, M.P.A. = 19 ppm

A small, warm water drainage stream flowing into the East Fork of the Chippewa River. Swamp and bog drainage and fluctuating water levels reduce the quality of this stream. Its fish population consists of mostly common shiners with some burbot, creek chubs, brook sticklebacks, blacknose dace and johnny darters. The lower portion of the stream has a cover of aspen and spruce while the upper end has a cover of willow - tag alder and open sedge swamp. Beaver and muskrat are present and a few nesting puddle ducks may be found in the headwaters region. One bridge crosses the stream and the entire stream length is in Chequamegon National Forest Land ownership.

Camp Six Creek, T44N, R4W, Section 24 to Section 14
Surface Acres = 0.7, Miles = 1.1, Gradient = 36 feet per mile, M.P.A. = 29 ppm

A small, drainage stream flowing into Mineral Lake in the Brunsweiller River system. This warm water minnow stream drains a dense shrub swamp. Muskrats are common and a few migratory ducks may be found here. One road bridge crosses it and 1.5 miles of frontage is in Chequamegon National Forest ownership.

City Creek, T44N, R2W, Section 16 to Section 5
Surface Acres = 1.4, Miles = 2.0, Gradient = 35 feet per mile, M.P.A. = 71 ppm

A small, cold water brook trout stream providing a good spawning area for Devils Creek into which it flows. This high gradient stream lacks sufficient instream cover for suitable trout habitat. A small impoundment near the headwaters once provided the City of Mellen with its water supply. Because of the stream's small size its wildlife value is limited. It has no public frontage other than a town road crossing it.

Deer Creek, T42N, R1E, Section 22, to T41N, R1E, Section 15
Surface Acres = 6.9, Miles = 6.3, Gradient = 19 feet per mile, M.P.A. = 22 ppm

Emerging from a willow - shrub swamp inhabited by beaver, it flows south to the Flambeau River. It is a brook trout stream of medium quality, and its two feeders from section 34 and 2 are also trout waters. Beaver are also present in the middle section of the stream and have contributed somewhat to the deterioration of the habitat by causing extreme siltation in the old flowage areas. Large swampy areas along the stream contribute low quality drainage water to the good quality spring water of Deer Creek. A large portion of the stream is relatively inaccessible, However, two bridges cross it and 2.2 miles of stream frontage is in Ashland County ownership. In addition to beaver, other wildlife present are a few nesting blue-winged teal and occasionally other migratory ducks.

Deer Creek, T46N, R4W, Section 9, to T47N, R4W, Section 34
Surface Acres = 2.0, Miles = 3.4, Gradient = 16 feet per mile, M.P.A. = 132 ppm

A small, minnow stream flowing into the White River. Fish habitat management problems include an unstable sand bottom, extreme fluctuations in water levels and poor instream cover. Other wildlife values are also minor. A total of 0.82 miles of frontage on the stream is in state, county and town land ownership . There are no roads crossing the stream.

Denomie Creek, T47N, R2W, Section 6, to T48N, R2W, Section 20
Surface Acres = 2.5, Miles = 3.4, Gradient = 7 feet per mile, M.P.A. = 51 ppm

A warm water, drainage stream with extreme fluctuations in water levels. Its fish population consists of mostly minnows, however, northern pike and perch are also present. It has a lengthy intermittent headwaters area flowing from the red clay soil region of the county. Stream bottom types are sand and clay. The outlet of the stream dissipates into a bog and swamp area which eventually speeds into Honest John Lake and the Bad River Slough. Beaver are present and puddle ducks nest along the stream's willow and shrub swamp and fresh meadow wetlands. It has no public frontage other than two roads crossing it.

Devils Creek, T44N, R2W, Section 1 to Section 6
Surface Acres = 7.8, Miles = 5.9, Gradient = 32 feet per mile, M.P.A. = 38 ppm

High quality trout stream with mainly brook trout, although brown or rainbow trout also present. The feeder streams to Devils Creek are also trout streams and include Montreal Creek, City Creek and Ballou Creek. A private fish hatchery license is issued to waters on an intermittent feeder in section 5. Water quality and fish habitat are good in most of the streams. The exception to this is in the headwaters portion in section 1 where beaver have contributed to siltation and cover loss. Muskrat are also common to parts of the stream as well as a few nesting puddle ducks. Three road bridges cross the stream and it has no other public frontage.

Dingdong Creek, T43N, R3W, Section 21, to T42N, R4W, Section 3
Surface Acres = 11.5, Miles = 9.5, Gradient = 8 feet per mile, M.P.A. = 20 ppm

Flowing into the Torch River, this stream can best be described as being marginal brook trout water. The low water quality can be attributed to dark water coloration, low acidity and relatively infertile water. In addition to trout, other species commonly found here are blacknose dace, mudminnows, johnny darters and a few brook sticklebacks, creek chubs, common shiners and white suckers. Beaver are active on the main stream and all its feeders. The principal stream bank vegetation is tag alder and sedge marsh along old beaver flowage areas and a large tamarack bog area near the feeder from section 10, T42N, R4W. It is a sluggish, low gradient stream having an unstable bottom type of sand and muck. Besides the beaver, muskrat are common along with a few nesting mallards and blue-winged teal. Only two road bridges cross the stream, making it rather inaccessible in most areas. A total of 18.2 miles of its 19.0 miles of total shoreline is publicly owned and is in Chequamegon National Forest ownership, with the exception of a small part owned by the state.

Dorns Creek, T41N, R2W, Section 11, to T42N, R2W, Section 26
Surface Acres = 11.3, Miles = 6.2, Gradient = 6 feet per mile, M.P.A. = 59 ppm

Originating as the outlet of Bullhead Lake, Dorns Creek flows generally north into the East Fork of the Chippewa River. A half mile downstream from the lake, springs emerge from the stream bed in an open marsh area and the stream widens to about twenty-five feet. Brook trout are common to this area in section 1, and for a distance of about two miles downstream the cold water habitat continues. Beyond this point for another two miles the trout habitat deteriorates so that at the section 24-25 town road, Dorns Creek becomes a minnow stream. The stream widens to about 351 at this point, and is quite sluggish. Generally the stream has an extremely low gradient and muck bottom, particularly in the spring areas. The broad downstream section appears to have once been the channel of a much wider stream such as the East Fork of the Chippewa into which it now flows. A small shallow spring pond in section 36 also contributes to the cold water habitat, however, it is in a deteriorated condition from beaver use. Beaver use has also been extensive on most of the main stream. Stream bank cover is predominantly tag alder and fresh meadow in the trout portion and scattered tamarack bog in the downstream minnow portion. Muskrat are also common as well as nesting mallards, black ducks and blue-winged teal. Migratory waterfowl use is ordinarily higher than other streams of its size and is probably due to Dorns Creek's proximity to the Chippewa River. Ashland County owns .60 miles of the stream frontage and two town roads cross the stream.

Dryden Creek, T43N, R1W, Section 10, to T42N, R2W, Section 20
Surface Acres = 19.5, Miles = 13.4, Gradient = 8 feet per mile, M.P.A. = 41 ppm

The headwaters portion of 4.4 miles of stream length has brook trout common to it. In the remaining downstream portion it becomes a minnow stream as large areas of bog swamp drain into the creek along with the warm water outlet flow of Gordon Lake through which Dryden Creek passes. Feeder streams to Dryden Creek below the trout portion are minnow streams and include Hinder Creek and two unnamed streams located in section 8, T42N, R2W, and section 28, T43N, R2W and the Torrey Lake outlet stream. The average stream gradient is low and it tends to have an unstable sand bottom. The immediate stream cover vegetation is mostly dense tag alders. Beaver and muskrat are common to the stream as well as nesting puddle ducks. Other migratory waterfowl use is medium to low. Ten bridges cross the stream and a total of 9.8 miles of stream bank is in public ownership which includes Chequamegon National Forest Land and Ashland County Forest Land.

East Fork Chippewa River, T42N, R1E, Section 3, to T41N, R4W, Section 33
Surface Acres = 517.8, Miles = 53.4, Gradient = 4 feet per mile, M.P.A. = 53 ppm

A major drainage stream flowing from Iron County, zigzagging diagonally across the south part of Ashland County. There are three natural lakes on broadened portions of the stream course and are known as Sells, Pelican and Bear Lakes. The portion of river above Sells Lake to the county line is trout water. Except for the upper four miles which is medium quality trout water, the remaining part to Sells Lake is low quality habitat. Occasionally, brown trout are found in the stream, but brook trout are the predominant species. The stream between Sells Lake and Glidden is mainly minnow water, while downstream from Glidden to the Price county line is mostly muskellunge, walleye and panfish water. Besides these species, largemouth and smallmouth bass are occasionally caught here. Trout streams feeding the river are Silver, Augustine, Willerth, Bear, Meyers, Dorns, Sheridan, Kempf, Kenyon, and Camp Creeks. A small unnamed feeder stream in section 31, T42N, R2W also has a few trout present in it. Other than the streams already mentioned the remaining named and unnamed streams feeding into the East Fork Chippewa River are all warm water minnow streams. A variety of vegetation types covers the river's watershed, ranging from pastured upland to dense matted bog vegetation. Water levels and flow are generally stable since the extensive wetlands on the river and its feeders tend to greatly decrease the rate of runoff. The stream bottom is quite stable and varies from predominantly sand to gravel, rock, boulders and muck in a few places. Beaver and muskrat are common to most of the stream, and active beaver dams are present near the Iron County line. Duck use is higher on this river than on any other stream in the county, and besides the migratory ducks there are occasionally Canada geese and coots. Extensive use is also made by nesting waterfowl. A total of 38.9 miles of stream bank frontage is in public ownership and includes Chequamegon National Forest and Ashland County lands. Canoeing is possible on most of this stream, but it is generally confined to the area downstream from Sells Lake. A total of thirteen road bridges cross the stream with other public access located at the terminals of dead-end town roads.

East Fork Torch River, T43N, R3W, Section 32, to T42N, R4W, Section 21
Surface Acres = 17.3, Miles = 9.5, Gradient = 7 feet per mile, M.P.A. = 19 ppm

Originating from a cedar - spruce swamp, it flows through an extensive tag alder and fresh meadow wetland region and into the Torch River. The portion of the stream south of Highway 77 for a distance of two miles is low quality brook trout water. The remainder has a fish population of white suckers and creek chubs, along with a few burbot, blacknose dace and johnny darters. It is a low gradient drainage stream with infertile, medium brown colored, acid water. It has had extensive use in the past by beaver. Muskrats are common along with a few nesting mallards, black ducks and blue-winged teal. Other migratory waterfowl use is minor. Several small feeder streams flowing into this river are also of minor importance and have the same low water quality as the main stream. Three road bridges cross it and 17.8 miles of its nineteen miles of stream bank are in public ownership, most of which is in Chequamegon National Forest Land except for 0.6 miles in state ownership.

Edies Creek, T44N, R3W, Section 19 to Section 32
Surface Acres = 1.6, Miles = 2.7, Gradient = 13 feet per mile, M.P.A. = 31 ppm

A small, warm water drainage stream flowing into the Iron River. Its watershed is mostly tag alder - shrub swamp and fresh meadow. It is a low gradient and unstable muck bottomed stream. Its fish population consists of common shiners, creek chubs and brook sticklebacks. Beaver are present and waterfowl use is practically nonexistent. One road bridge crosses the stream and its entire stream bank is in Chequamegon National Forest Land ownership.

Feldcher Creek, T45N, R2W, Section 12 to Section 2
Surface Acres = 0.7, Miles = 1.0, Gradient = 55 feet per mile, M.P.A. = 34 ppm

A small, brook trout, spring feeder stream to the Tyler Forks River. The stream bank cover is pastured upland hardwood. It is a medium quality stream providing a minor spawning area for trout of the Tyler Forks River system. Siltation tends to make the bottom unstable. Waterfowl and furbearer use is insignificant. Its only public frontage is a state and town road crossing the stream.

Fishtrap Creek, T41N, R4W, Section 22 to Section 31
Surface Acres = 5.1, Miles = 4.2, Gradient = 12 feet per mile, M.P.A. = 12 ppm

A warm water, drainage stream flowing from a large tag alder and willow shrub swamp. It has a fish population of minnows. Water quality is poor in that it has infertile water, dark brown in color and a low pH. Water level fluctuations are extreme. Active beaver dams exist on the main stream and its feeder. Muskrat are common as well as a few nesting puddle ducks. The entire stream length is in public ownership most of which is Chequamegon National Forest Land with a minor part in state ownership. A small feeder stream flowing from section 20 is also a minnow stream.

Flambeau River, T41N, R1E, Section 12 to Section 32
Surface Acres = 274.8, Miles = 10.2, Gradient = 3 feet per mile, M.P.A. = 34 ppm

Sometimes known as the North Fork of the Flambeau River, this stream flows through the southeast corner of the county from Iron to Price County and into Upper Park Falls Flowage. The stream bank vegetation is predominantly hardwood and conifer upland, some of which is pastured. About 800 acres of shrub and fresh meadow wetlands border the stream, mostly in large bay areas. These wetlands provide habitat for muskrat and beaver and a number of ducks and mergansers. Generally the other migratory waterfowl use on the stream is medium. The main fishery is for muskellunge and smallmouth bass, however, northern pike are also present. There is also an abundant population of redhorse and white suckers along with a few common shiners and hog suckers. Private development of the stream bank is small as yet, with only seven homes, most of which are farm dwellings. It is accessible near the Price county line in section 32 at two access sites, but there is no other public frontage. Of the stream flowing into the Flambeau River only Rapid and Deer Creeks are trout water. Hoffman Creek and the unnamed feeder streams in sections 31, 32, 21, 22 and 12 are all minnow streams. Instream cover on the river is good with a number of deep holes providing fishing sites. However, during the later summer months, submerged aquatic vegetation becomes dense in the shallow water areas. The stream is easily canoeable and some portions are suitable for outboard boating.

Frames Creek, T45N, R4W, Section 33 to Section 23
Surface Acres = 0.6, Miles = 1.7, Gradient = 50 feet per mile, M.P.A. = 16 ppm

A small, spring feeder stream flowing into Spring Brook. It has good spawning habitat, but its main value is in being a trout reproduction area for Spring Brook. Brook trout are common here and brown and rainbow trout are present. Its stream bank vegetation is mainly hemlock and swamp hardwood. Waterfowl and furbearer values are minor. Almost the entire length of the stream is in Chequamegon National Forest Land ownership.

Gehrman Creek, T45N, R2W, Section 23 to Section 15
Surface Acres = 0.6, Miles = 0.5, Gradient = 70 feet per mile, M.P.A. = 55 ppm

Flowing through a partly pastured upland hardwood region to the Tyler Forks River. The stream has an abundance of small brook trout and it provides a spawning area for the nearby river. Although there are extreme fluctuations of water levels, they do not greatly affect the habitat conditions for fish. Its wildlife value is limited to use by a few migratory ducks. It has no public frontage other than one state road bridge crossing.

Gravelly Brook, T44N, R3W, Section 15 to Section 14
Surface Acres = 0.1, Miles - 0.5, Gradient = 170 feet per mile, M.P.A. = 21 ppm

A small, high gradient feeder stream to the Bad River. It has a warm water fish population of a few creek chubs and johnny darters. The stream bottom varies from bedrock and boulder to gravel and a small amount of sand. Due to its small size, its wildlife value is low.

Gully Creek, T45N, R2W, Section 36 to Section 26
Surface Acres = 1.7, Miles = 2.4, Gradient = 37 feet per mile, M.P.A. = 27 ppm

A small, brush covered trout spawning feeder stream to Montreal Creek. It is medium quality brook trout water. It has stable sand and gravel bottom conditions. Its watershed is mostly hardwood upland. Beaver are active on this stream but its waterfowl value is low because of its small size. Gully Creek is not accessible by road and its entire length is in private ownership.

Happy Creek, T44N, R2W, Section 19, to T44N, R3W, Section 14
Surface Acres = 2.0, Miles = 3.4, Gradient = 59 feet per mile, M.P.A. = 30 ppm

This small, medium quality brook trout stream flowing into the Bad River has a good vegetative cover of various types and a rather high gradient. The headwaters region is partly pastured land and much of the downstream region is rather inaccessible. A number of minnow species are common to this stream with creek chubs and white suckers being the most abundant and common shiners, blacknose dace, mudminnows and sculpin also present. Because of small size its waterfowl and furbearer use is not significant, although evidence of old beaver use in the downstream area was found. It is accessible at two road bridges and it has no other public frontage.

Hardscrabble Creek, T44N, R3W, Section 16 to Section 14
Surface Acres = 1.1, Miles = 1.8, Gradient = 90 feet per mile, M.P.A. = 21 ppm

A small, high gradient brook trout stream flowing into the Bad River. Trout reproduction is poor here due to the rocky nature of the stream bottom and the steep gradient. White suckers, creek chubs, sculpin and blacknose dace are also present. Instream cover is good and bank vegetation is predominantly upland hardwood. Waterfowl and other wildlife values here are practically nonexistent. Accessibility is poor in that there are no roads nearer than a mile and none of the stream frontage is publicly owned.

Hay Creek, T41N, R3W, Section 16 to Section 36
Surface Acres = 2.5, Miles = 3.4, Gradient = 6 feet per mile, M.P.A. = 20 ppm

A minnow feeder stream to the East Fork of the Chippewa River. Although this drainage stream has some spring water sources, partly from two ponds located in section 21, the water quality and habitat conditions are poor. It has infertile and acid water and because of its low gradients it has a sluggish flow. An unstable silt and sand bottom and extensive beaver use also contributes to the poor habitat quality. Vegetative cover around its watershed includes a conifer swamp at its headwaters and an extensive tag alder and fresh meadow wetland region along the remainder of the stream. Besides the beaver, muskrat are common along with a few nesting mallards and black ducks. It is accessible at one road bridge and nearly all of the stream bank is in Chequamegon National Forest Land ownership.

Hell Hole Creek, T44N, R4W, Section 15 to Section 21
Surface Acres = 1.4, Miles = 2.4, Gradient = 10 feet per mile, M.P.A. = 20 ppm

A warm water, drainage stream originating from the outlet of Gilbert Lake and a small feeder from section 16. The entire stream length is minnow water. Much of the watershed is tag alder - shrub swamp and bog. Bottom types are unstable sand and muck and the stream has had extensive use by beaver. Its fish population consists of creek chubs, bluntnose minnows, brook sticklebacks, mudminnows and johnny darters. Its total wildlife value is low. There are no roads crossing the stream making it relatively inaccessible. A total of 3.3 miles of its 4.8 miles of stream bank is in Chequamegon National Forest ownership.

Hildebrandt Creek, T42N, R1W, Section 35, to T41N, R1W, Section 2
Surface Acres = 1.2, Miles = 1.6, Gradient = 15 feet per mile, M.P.A. = 66 ppm

A small, spring feeder stream to Butternut Creek. A good brook trout population exists which is adequately reproducing even though unstable sand and muck bottom types make habitat unfavorable. Bank cover is tag alder and spruce. Some damage from old beaver flowage areas is evident. The stream is relatively inaccessible due to a lack of roads and public frontage. Muskrat and waterfowl use is minor. There is a small private impoundment on the stream in section 2, T41N, R1W which is of recent construction. Some confusion of stream names has taken place as an insignificant warm water feeder, containing minnows, to the west in sections 3 and 10 is also called Hildebrandt Creek. However, this stream's value as a trout stream warrants this name clarification.

Hinder Creek, T42N, R2W, Section 3, to T43N, R2W, Section 33
Surface Acres = 0.7, Miles = 1.1, Gradient = 9 feet per mile, M.P.A. = 18 ppm

A small, infertile, low gradient warm water minnow feeder flowing into Gordon Lake from the Dryden Creek watershed. This drainage stream has an unstable muck and sand bottom and contains a fish population of common shiners and brook sticklebacks. The small amount of spring water seeping into the creek is evidently due to its lack of dissolved oxygen, and poor quality water. Stream bank cover is mostly tag alder with some spruce and hardwood swamp. Furbearer and waterfowl use is minor. It is accessible at two road bridges and its only public frontage is 0.6 miles of school lands.

Hoffman Creek, T41N, R1E, Section 25 to Section 33
Surface Acres = 3.1, Miles = 4.3, Gradient = 9 feet per mile, M.P.A. = 12 ppm

A warm water, drainage stream flowing through Hoffman Lake and the Hoffman Lake Wildlife Area into the Flambeau River. The fish population is basically minnows. The total species composition consists of northern pike, perch, white suckers, common shiners, creek chubs, blacknose dace, johnny darters and mudminnows, none of which are very abundant. Briefly, this stream can be characterized as having a low pH, dark brown infertile water, a low gradient and draining mostly swamp areas of conifer, shrub, sedge meadow and extensive bogs. Beaver are present and a limited number of ducks use the stream and its adjacent wetlands. It is accessible at one point below the lake by trail and 6.8 of its 8.6 miles of stream bank is in Wisconsin Conservation Department ownership.

Hungry Run, T42N, R3W, Section 33, to T41N, R3W, Section 30
Surface Acres = 8.3, Miles = 7.6, Gradient = 3 feet per mile, M.P.A. = 19 ppm

A warm water, drainage stream flowing into the East Fork of the Chippewa River upstream from Bear Lake. Its most abundant fish species are white suckers and creek chubs. Common shiners, mudminnows, johnny darters and brook sticklebacks are also present. Basic stream characteristics are infertile acid water of a dark brown coloration, an extremely low gradient, an unstable sand and muck bottom and extremely fluctuating water levels. Stream bank vegetation is mostly sedge meadow and tag alder swamp. Beaver and muskrat utilize this stream extensively along with migratory waterfowl. Duck nesting is also common along the stream. It is accessible at three road bridges, however, much of the lower half of the stream is difficult to reach. The entire stream bank is in Chequamegon National Forest ownership. The small feeder streams to Hungry Run are also minnow streams and have the same water characteristics as the main stream.

Iron River, T43N, R4W, Section 12, to T44N, R3W, Section 26
Surface Acres = 11.5, Miles = 6.8, Gradient = 7 feet per mile, M.P.A. = 19 ppm

A low quality trout stream originating as two small feeders to McCarthy Lake. It flows out of the lake through a large tag alder and willow swamp and into the Bad River. Two trout streams feed into the Iron, Brush and Squaw Creeks. The other small feeders flowing into it are minnow streams. Brook and brown trout inhabit the area between the lake and the Bad River. Bottom conditions are rather poor in that they are mostly sand and muck. The waters are acid, have low fertility, dark brown in color and the stream has a low gradient. Extremes in water level fluctuations also occur. Muskrat and beaver have used the stream extensively. There is also usage by nesting puddle and diving ducks and migratory birds. It is accessible at two road bridges, one on the upper end and one adjacent to the stream at the outlet. The entire length of the stream is in Chequamegon National Forest ownership.

Kakagon River, T48N, R3W, Section 25 to Section 23
Surface Acres = 8.0, Miles = 1.1, Gradient = 7 feet per mile, M.P.A. = 51 ppm

A short, broad drainage stream flowing into the Kakagon Slough to Chequamegon Bay on Lake Superior. Outlet flow varies considerably according to runoff. Boundary limits were arbitrarily established for the slough and river measurement at the end of the town road in section 23. The river is a sluggish, low gradient stream and its stream bank vegetation is mostly shrub swamp. Fish species composition is about the same as the slough and includes northern pike, walleye, largemouth bass, panfish, suckers and minnows. Beaver and muskrat are present along with nesting ducks and other migratory waterfowl. It is accessible at the two town road bridges which are its only public frontage.

Kelp Creek, T41N, R3W, Section 33 to Section 32
Surface Acres = 0.5, Miles = 1.5, Gradient = 33 feet per mile, M.P.A. = 27 ppm

A warm water, drainage stream having a low gradient on most of its length except near where it flows into the East Fork of the Chippewa River. The outlet flow varies greatly and there has been heavy use by beaver. Water quality is poor in that it has infertile acid water of medium brown coloration. Much of the watershed is sedge meadow and tag alder - willow swamp. Besides the beaver its other wildlife values are limited due to its small size, although a few migratory ducks off the main river use the stream occasionally. Its entire length is in Chequamegon National Forest Land ownership and it is accessible at two bridge crossings.

Knab Creek, T43N, R2W, Section 22 to Section 10
Surface Acres = 1.1, Miles = 1.9, Gradient = 38 feet per mile, M.P.A. = 28 ppm

Originating as a small outlet flow from Summit Lake it flows through Knab Lake and into the Bad River. The portion of the stream between Summit Lake and Knab Lake is minnow water while from the outlet of Knab Lake to the river is medium quality brook trout water. Bottom conditions of the stream tend to be unstable muck and sand. Stream bank vegetation cover is conifer swamp and fresh meadow. Muskrat are common along with occasional migratory duck. It is accessible at two road bridges and 2.8 of its 3.8 miles of stream bank is in Chequamegon National Forest ownership.

Krause Creek, T45N, R3W, Section 36, to T45N, R2W, Section 19
Surface Acres = 1.9, Miles = 3.2, Gradient = 86 feet per mile, M.P.A. = 30 ppm

A small, brook trout stream with better than average water quality flowing into the Bad River. It has generally stable bottom conditions of sand and gravel, however, the stream flow varies considerably. Intensive pasturing on the headwaters portions and midsection of stream has a deleterious effect. Stream bank cover is mostly upland hardwood with occasional areas of hardwood swamp. Its furbearer and waterfowl use is minor. It is accessible at four road bridges and 0.4 miles of its stream bank is in the Town of Morse ownership.

Little Moose River, T42N, R4W, Section 30
Surface Acres = 0.1, Miles = 0.1, Gradient = 10 feet per mile, M.P.A. = 14 ppm

Beginning as a small flow from a swamp hardwood and brush drainage area it flows into Sawyer County and the Moose River. The stream bank is mostly tag alder, willow and sedge wetlands and bottom types are sand and muck. Its fish species consist of minnows. Beaver are present. It is not accessible in Ashland County, but its entire length is in Chequamegon National Forest Land ownership.

Magee Creek, T43N, R1W, Section 14, to T43N, R1W, Section 32
Surface Acres = 19.4, Miles = 10.7 Gradient = 9 feet per mile, M.P.A. = 14 ppm

A warm water, drainage stream flowing from Iron County through the Ashland County Forest and into the East Fork of the Chippewa River. It has a large and varied minnow population with creek chubs, common shiners and white suckers being the most common. The quality of the water is poor in that it is infertile, acid, medium brown in color, and sluggish in flow due to a low gradient. Beaver use is extensive along with muskrats and nesting puddle ducks. Other migratory waterfowl are also common here in certain seasons.

Magee Creek-continued

It is bordered mostly by swamp, the majority of which is tag alder and old fresh meadow beaver flowed areas. Bottom conditions are mostly unstable sand and muck. It is accessible at two road crossings and 12.2 miles of the 21.4 miles of shoreline is in Ashland County Forest Land ownership. Three small warm water feeders also flow into Magee Creek. A spring pond in section 16 provides a minor amount of spring water to the main stream. A few brook trout inhabit the spring pond and its outlet stream.

Marengo River, T45N, R4W, Section 6, to T46N, R3W, Section 25
Surface Acres = 187.3, Miles = 20.6, Gradient = 5 feet per mile, M.P.A. = 49 ppm

Flowing from Bayfield County this marginal trout stream drains eventually into the Bad River. Brown trout is the most common game fish present but rainbow trout also occur. The rainbows are mostly migratory fish from Lake Superior and are caught during the spring months. Generally, the stream has an unstable bottom and a low gradient. Water level fluctuations are extreme. Other fish species present include smallmouth bass, panfish, suckers, redhorse, common shiners, creek chubs, blacknose and longnose dace. Altogether, the minnow species are the most common fish. About half the watershed in Ashland County is agricultural lands and the normally clear water often becomes turbid as a result of the pasturing. Trout feeder streams to the Marengo River include the Brunsweiller River, Silver, Billy and Troutmere Creeks, and a small feeder stream in section 4, T45N, R3W. Another small feeder in the same section has three hatchery licenses issued on ponds in its headwaters. Only minor use of the stream is made by furbearers and nesting and other migratory ducks. The stream is spanned by seven road bridges and one mile of stream bank is in Ashland County ownership.

McCarthy Creek, T44N, R3W, Section 17, to T44N, R4W, Section 23
Surface Acres = 5.8, Miles = 6.9, Gradient = 19 feet per mile, M.P.A. = 18 ppm

A medium quality brook trout stream flowing into the Brunsweiller River. Stream bank vegetation consists of hardwood and tag alder swamp. Extensive beaver use has deteriorated trout habitat. Active beaver dams now exist on the main stream and on the feeder in section 34. This feeder and those located in sections 25, 23 and 22 are all warm water minnow streams. Predominant bottom types on McCarthy Creek are sand and silt, along with a few gravel riffles used by spawning trout. Two bridges cross the stream and 11.1 of the 13.8 miles of stream bank frontage are in Chequamegon National Forest ownership.

Meyers Creek, T43N, R1W, Section 19, to T42N, R2W, Section 1
Surface Acres = 2.6, Miles = 3.6, Gradient = 7 feet per mile, M.P.A. = 14 ppm

A low quality, brook trout stream flowing into the East Fork of the Chippewa River. It drains a number of old beaver marshes. Water quality characteristics which make Meyers Creek a marginal stream are infertile, acid and dark brown water, and a flow which becomes sluggish midway from the outlet. Bottom types are mainly muck with some sand and insignificant areas of gravel. Water levels are extremely variable. Besides the beaver, its wildlife use includes muskrats, and a few nesting puddle ducks. The creek is crossed by two road bridges and 1.6 miles of its banks are in Ashland County Forest Land ownership.

Minnie Creek, T43N, R1W, Section 5, to T44N, R2W, Section 35
Surface Acres = 2.8, Miles = 2.3, Gradient = 13 feet per mile, M.P.A. = 21 ppm

A medium quality trout stream with brook trout the most common and brown trout present. Water temperatures tend to be marginal for trout. Bottom conditions are stable and adequate spawning areas are provided for trout. Occasionally, extreme water level fluctuations are a problem. Most of the stream bank cover is dense tag alder swamp, with other cover of conifer - hardwood upland, fresh meadow, and conifer swamp. Muskrats are common along with a few nesting mallards, black ducks and teal. Some use is also made of the stream by other migratory waterfowl. One road bridge crosses Minnie Creek and practically all of the stream bank is in Ashland County Forest and Chequamegon National Forest Land ownership.

Minnow Creek, T44N, R2W, Section 24, to T43N, R2W, Section 5
Surface Acres = 5.9, Miles = 4.9, Gradient = 11 feet per mile, M.P.A. = 19 ppm

Mostly a warm water stream draining the east central part of the county. Beginning as the outlet flow of Twin Lakes, it flows through Eureka Lake and Gallilee Lake and then into a bog and swamp region where its flow is dissipated. It emerges again from the bog northeast of Beaver Lake, which it flows through, and then receives the outlet drainage from Snowshoe, Meader and Long Lakes before reaching its outlet at the Bad River. Flow on the stream varies considerably and all of its length is minnow water except for 1.6 miles of the stream from the Meader Lake feeder downstream to the first road crossing. The waters are infertile, slightly acid, and light brown in color. Runoff is low evidently because of storage in the watershed. The stream has a gradient of eleven feet per mile. Wildlife values include extensive use by beaver, muskrat, and nesting ducks. Two bridges provide access to the stream and 5.4 of the 9.8 miles of stream bank is in Chequamegon National Forest and Ashland County Forest ownership.

Montreal Creek, T45N, R2W, Section 25 to Section 5
Surface Acres = 8.8, Miles = 6.1, Gradient = 25 feet per mile, M.P.A. = 23 ppm

Flowing from Iron County into Devils Creek near its outlet to the Bad River, this medium water quality stream has a good population of brook trout. Extreme water level fluctuations and beaver use are management problems. It is not easily accessible in that its two road crossings are located at the county line near its outlet. Muskrat and nesting ducks are common along with beaver. One of its feeders, Billy Creek, is also a trout stream. There is no public frontage on the stream.

Moose River, T43N, R3W, Section 34, to T41N, R4W, Section 6
Surface Acres = 62.2, Miles = 17.1, Gradient = 6 feet per mile, M.P.A. = 19 ppm

A warm water, drainage stream flowing into Sawyer County and the West Fork of the Chippewa River drainage system. Although a few perch, walleye and rock bass migrate upstream from Moose Lake, the Moose River is mostly a rough fish and minnow stream. The most abundant fish species are burbot, creek chubs, white suckers, mudminnows and blacknose dace. Other species present are common shiners, johnny darters and brook sticklebacks. Water quality is poor in that it is infertile, acid and dark brown in color, and has extremes in water level fluctuations. Practically all of the immediate vegetation cover on the stream is tag alder, willow and sedge swamp. Beaver use is excessive and muskrat are common. Crayfish are numerous in the stream. Nesting duck use is moderate as well as other migratory waterfowl use. All the feeder streams to the Moose River in Ashland County are warm water minnow streams. It is accessible at four road bridges and 30.6 of its 34.2 miles of stream bank is in Chequamegon National Forest and state-owned lands.

Morgan Creek, T45N, R4W, Section 27 to Section 30
Surface Acres = 2.5, Miles = 3.4, Gradient = 22 feet per mile, M.P.A. = 29 ppm

A spring feeder stream flowing into Ashland County and the Marengo River. It is a good quality brook trout stream having a few brown trout present. Extensive beaver use on the mid portion of the stream has deteriorated the trout habitat in this region. They are presently active near the county line. Its feeders are also cold water streams and the one entering Morgan Creek in the middle of section 30 has a high scenic waterfall. The U. S. Forest Service campground is being reestablished there. Stream bottom is generally stable and varies from small regions of muck in the beaver flowage areas to extensive areas of bedrock. Other species of fish, in addition to trout, are muskellunge, white suckers, common shiners, numerous creek chubs, sculpin, blacknose dace, redside dace, mudminnows and johnny darters. Muskrats are common as well as a few nesting mallards and black ducks. Two bridges cross the stream but much of it is rather inaccessible. Its entire length of 6.8 miles is in Chequamegon National Forest Land ownership.

Morrison Creek, T48N, R2W, Section 36
Surface Acres = 0.2, Miles = 0.4, Gradient = 57 feet per mile, M.P.A. = 141 ppm

A small, drainage stream flowing directly into Lake Superior. The length of the stream and its flow vary greatly since it drains a flat clay soil region. Its small fish population consists of minnows. It is not accessible by road and has no public frontage.

Muskellunge Creek, T42N, R3W, Section 11, to T42N, R2W, Section 30
Surface Acres = 5.6, Miles = 4.2, Gradient = 9 feet per mile, M.P.A. = 26 ppm

A warm water, drainage stream flowing through Muskellunge Lake, and then into the East Fork of the Chippewa River. It is principally a minnow stream; species present include perch, burbot, common shiners, creek chubs, log perch, and numerous white suckers. Its flow varies considerably in volume and the water is slightly acid, infertile, and medium brown colored. A small feeder flowing into the Muskellunge Lake on this water system is a brook trout stream. Beaver are present and muskrats are common along with a few nesting ducks. It also receives moderate use by other migratory waterfowl. It is accessible at one road bridge and 6.0 miles of its 8.4 miles of stream bank is in Chequamegon National Forest ownership.

Muskellunge Lake Feeder, T42N, R2W, Section 7, to T42N, R3W, Section 13
Surface Acres = 0.4, Miles = 0.8, Gradient = 6 feet per mile, M.P.A. = 40 ppm

A small, spring feeder stream to Muskellunge Lake. It has a fish population of brook trout. Because of unstable sand and muck bottom conditions, there is inadequate spawning area on the stream. Excessive aquatic vegetation may also be considered a problem. Also, because of its small size other wildlife values are minor. It is not accessible by road but one-half or 0.8 miles of its stream bank is in Chequamegon National Forest Land ownership.

Nawago Creek, T48N, R2W, Section 35
Surface Acres = 0.4, Miles = 0.3, Gradient = 66 feet per mile, M.P.A. = 156 ppm

A small, drainage stream flowing directly into Lake Superior. It has a fish population of a few minnow species. Extreme variations in water volume is mainly due to a flat landscape and red clay soil type in the watershed. Bank cover vegetation is mostly hardwood and conifer upland with a small willow and tag alder swamp near its outlet. Because of the stream's small size its wildlife value is low. It is not accessible by road and has no public frontage. There is a private campground on Lake Superior near the stream.

Nelson Creek, T41N, R1W, Section 5, to T42N, R1W, Section 28
Surface Acres = 0.9, Miles = 1.8, Gradient = 3 feet per mile, M.P.A. = 5 ppm

A low quality drainage stream flowing from a tamarack bog and into Schraum Creek. Its fishery is limited to minnows. The stream's water quality is poor, its characteristics being acid water, low fertility, low gradient and dark brown colored water. Because of the stream's small size it has a low furbearer or waterfowl use except for an occasional migratory puddle duck. It is not accessible by road and 0.6 of its 3.6 miles of shoreline is in Ashland County ownership.

Pine Creek, T41N, R2W, Section 15 to Section 33
Surface Acres = 5.3, Miles = 5.5, Gradient = 29 feet per mile, M.P.A. = 74 ppm

A high quality brook trout stream flowing into Price County and the Flambeau River drainage system. Three small feeders flowing into Pine Creek are also trout waters. Trout reproduction on this stream and its feeders is good in most areas. Stream bank vegetation is mostly tag alder. A small part of the stream bank is pastured and about 10 percent of its watershed is agricultural land. Beaver are present as well as a few nesting puddle ducks. Muskrat and migratory waterfowl use is minor. It is accessible at two town roads, but it has no other public frontage. As the stream leaves Ashland County its water quality deteriorates, probably due to excessive swamp drainage, and it becomes a minnow stream.

Potato River, T46N, R2W, Section 13, to T46N, R3W, Section 24
Surface Acres = 46.7, Miles = 11.0, Gradient = 15 feet per mile, M.P.A. = 25 ppm

A drainage stream flowing from Iron County into northern Ashland County and then into the Bad River. It is considered low quality trout water with brook, brown and rainbow trout all present. The rainbows are principally migratory fish from Lake Superior and are oocasionally caught during the spring months. Although its water quality is medium in respect to water temperature and chemistry, the stream is subject to extremes in water level fluctuations and has unstable sand and clay bottom conditions in many areas. Many of the feeders flowing into the Potato River are intermittent and do not flow most of the year. The ones with permanent flows are Vaughn Creek, a warm water, minnow stream and Winks Creek, a brook trout stream of good quality. Most of the river is relatively inaccessible and only one road bridge crosses it. A total of 2.9 miles of county-owned stream bank is the extent of its public frontage. Beaver are present as well as a few nesting puddle ducks although wetlands are conspicuously absent.

Rapid Creek, T41N, R1E, Section 9 to Section 29
Surface Acres = 3.9, Miles = 4.0, Gradient = 13 feet per mile, M.P.A. = 52 ppm

A spring feeder stream to the Flambeau River. Brook trout are common in it. There are two private fish hatchery licenses issued to ponds on the head waters feeder. Water quality in the stream is generally good except in the area south of the town road in section 29 where it deteriorates. All of its feeders are trout waters except one flowing from a large bog area in section 18. This stream contributes a small amount of acid bog drainage water that readily discolors the downstream portions of Rapid Creek. Extensive beaver damage has taken place on the lower half of Rapid Creek. Muskrat are common as well as a few nesting puddle ducks. A small spring pond is located in section 20. Rapid Creek is accessible at one town road and has no other publicly-owned stream bank.

Reins Creek, T41N, R3W, Section 23 to Section 22
Surface Acres = 0.5, Miles = 1.3, Gradient = 38 feet per mile, M.P.A. = 53 ppm

A small, spring water feeder stream which empties into Camp Creek near its outlet to the East Fork of the Chippewa River. Brook trout are present and water quality and spawning conditions are good. Due to the stream's small size, however, furbearer and waterfowl use is limited except for a few migratory ducks. Most of the stream bank vegetation is tag alder - willow swamp and sedge - fresh meadow. It is not accessible by improved road and its entire length is in Chequamegon National Forest Land ownership.

Rocky Run, T41N, R2W, Section 18, to T41N, R3W, Section 1
Surface Acres = 3.7, Miles = 3.8, Gradient = 11 feet per mile, M.P.A. = 63 ppm

A warm water, swamp drainage stream flowing into the East Fork of the Chippewa River. Although a few brook trout may be present, it is principally a minnow stream. Water quality is good, however, it has an extremely unstable muck bottom and great variations in water flow. Beaver and muskrat are common on the stream as well as a few nesting puddle ducks. The Rocky Run watershed is mostly swampland. Vegetation is mostly tag alder - willow shrub swamp and sedge meadow with some areas of hardwood and conifer swamp. Except for Bay Creek and its outlet that flows into the stream, the feeders are all minnow waters. One town road bridge crosses the stream and 0.8 miles of its bank are in Chequamegon National Forest Land ownership.

Rocky Run, T44N, R3W, Section 9 to Section 11
Surface Acres = 1.1, Miles = 1.9, Gradient = 68 feet per mile, M.P.A. = 27 ppm

A small, spring feeder stream to the Bad River. Brook trout are present in the stream and water quality is good. However, features which detract from its good water quality are its extremely high gradient and rock and gravel bottom. Its bank vegetation is mostly hardwood and conifer upland with a few tag alders near the outlet. There is little reproduction in the stream. The feeder stream in section 3 is a minnow stream. Furbearer and waterfowl use is minor. It is rather inaccessible since no roads cross the stream and none of its length is in public ownership.

Schraum Creek, T42N, R1W, Section 28, to T42N, R2W, Section 14
Surface Acres = 20.7, Miles = 9.5, Gradient = 3 feet per mile, M.P.A. = 58 ppm

An extremely low gradient, warm water stream, draining large tamarack, spruce swamps and flowing into the East Fork of the Chippewa River. Its main fish population is minnows with a few northern pike present in the lower portion. Its stream course at one time was probably the ancient bed of the East Fork of the Chippewa River. The course of the river has since changed to its present location north of Schraum Creek, leaving the creek as a broad, shallow, low gradient stream. The vegetative bank cover in the headwaters area is sedge and grass meadow. Bottom types are mostly silt and sand and about ten percent of the stream bank is pasture land. Nelson Creek and a small unnamed feeder in section 18 are warm water minnow streams while a small unnamed stream flowing into Schraum Creek in section 31 has a few brook trout present in it. Besides a few beaver, the extensive wetlands bordering the stream also have muskrat and nesting puddle ducks. A total of 2.8 miles of stream bank is in Town of Jacobs and Ashland County ownership. It is accessible at three road crossings.

Scott - Taylor Creek, T45N, R2W, Section 21 to Section 16
Surface Acres = 0.9, Miles = 1.6, Gradient = 56 feet per mile, M.P.A. = 66 ppm

A small, but good quality brook trout stream flowing into the Tyler Forks River adjacent to Copper Falls State Park. The stream bank is about half pastured and vegetation is mostly hardwood - conifer upland with some tag alder near its outlet. Its wildlife value is limited to only a few migratory ducks. The stream is not readily accessible since no bridges cross it and none of its stream bank is in public ownership.

Sheridan Creek, T41N, R2W, Section 3, to T42N, R2W, Section 34
Surface Acres = 0.6, Miles = 1.0, Gradient = 6 feet per mile, M.P.A. = 38 ppm

A small spring fed brook trout stream flowing into the East Fork of the Chippewa River. Habitat conditions are marginal since the stream bed is heavily silted. Trout reproduction is limited and growth rates are poor. Stream bank vegetation is mostly tag alder swamp. Because of its small size, its other wildlife value is limited. It is not accessible by public road, although a private trail crosses the stream at its midsection. A total of 0.6 miles of its 2.0 miles of stream bank is in state ownership.

Silver Creek, T42N, R1E, Section 5, to T42N, R1W, Section 12
Surface Acres = 2.6, Miles = 2.4, Gradient = 33 feet per mile, M.P.A. = 74 ppm

A good quality, spring fed brook trout stream flowing into the East Fork of the Chippewa River. Although it has an abundant trout population, they are mostly small in size. Some beaver damage has taken place on the stream, but otherwise, habitat and spawning conditions are good. Stream bank vegetation varies from wooded upland to shrub swamp and fresh meadow. A small spring pond is located in section 7 northwest of the stream. Beaver have occasionally been active on this pond and at present have active dams on the stream below the pond outlet. Puddle duck nesting is common in the beaver flowage areas and medium use is made by other migratory ducks. Accessibility is poor since no roads cross this stream, however, the entire stream bank is in Ashland County Forest Land ownership.

Silver Creek, T45N, R3W, Section 27, to T46N, R3W, Section 34
Surface Acres = 6.8, Miles = 7.0, Gradient = 90 feet per mile, M.P.A. = 48 ppm

A spring water trout stream flowing north into the Marengo River. Rainbow trout are the most abundant and their reproduction is excellent in this stream. Brooks are common and a few brown trout are also present. Occasionally, migratory rainbow trout enter the stream by way of the Bad River from Lake Superior. Although the water quality is good, extremely fluctuating water levels are a problem to its fish habitat management. Stream bank cover is mostly upland hardwood with some of it being pastured. Another characteristic of the stream is its broad floodplain. Furbearer and waterfowl values are minimal. Access may be had at three road crossings and this is the extent of its public frontage.

Smith Creek, T41N, R1W, Section 35
Surface Acres = 0.5, Miles = 1.1, Gradient = 16 feet per mile, M.P.A. = 20 ppm

The headwaters region of the largest stream in Price County, it originates in Ashland County as two feeders, the main stream being located in section 35 while the smaller feeder is located in section 34. The stream eventually flows into the Flambeau River in Price County. Its main fish population is minnows although an occasional brook trout may be found. Water quality is marginal since it drains large tag alder swamps and it has rather infertile, acid, brown colored water. The stream course itself is broad and boulder strewn with extensive beaver damage in some areas. Because of its small size, duck use is not significant. It is accessible only on the west feeder in Ashland County and none of its stream bank is in public ownership.

Spider Creek, T43N, R4W, Section 1 to Section 3
Surface Acres = 2.4, Miles = 2.8, Gradient = 5 feet per mile, M.P.A. = 25 ppm

A sluggish, warm water stream flowing into Spider Lake. It has water which is dark brown in color, acid and relatively infertile. This drainage stream has a fish population of muskellunge, perch, largemouth bass, black crappies, pumpkinseeds and numerous minnows. This fish population composition reflects the stream's close proximity with Spider Lake which also contains these species. Brook trout may be found here occasionally, but are extremely rare. The stream has extreme variations in water levels and its stream bank vegetation is mostly tag alder and hardwood swamp. Beaver and muskrat are common along with a few nesting mallards and black ducks. Other migratory waterfowl use is minor. It is accessible at two road bridges and 4.9 of its 5.6 miles of stream bank frontage is in Chequamegon National Forest Land ownership.

Spiller Creek, T41N, R1W, Section 8 to Section 31
Surface Acres = 4.6, Miles = 5.5, Gradient = 12 feet per mile, M.P.A. = 62 ppm

A minnow, drainage stream which drains a large swampy area west of Butternut. It flows south into Price County and Butternut Creek. It has diverse bank vegetation of willow, sedge, tag alder, cedar, spruce, tamarack, black ash and cattail swampland. A small inlet feeder flows into Spiller Creek from a poor quality spring pond located in section 20. This pond also has a warm water fishery and at one time was licensed as a private fish hatchery. The stream's main value is its muskrat, beaver and waterfowl. It is accessible at five town road crossings and it has no other public frontage.

Spillerberg Creek, T43N, R2W, Section 19 to Section 9
Surface Acres = 5.3, Miles = 4.9, Gradient = 9 feet per mile, M.P.A. = 19 ppm

A warm water, drainage stream flowing from Spillerberg Lake into the Bad River. This infertile, acid and dark brown water stream has a fish population of predominantly minnows, although perch, bluegills and pumpkinseeds are also present. The stream bank vegetation of this sluggish, unstable bottomed creek is tamarack, spruce cedar and tag alder swamp and sedge meadow. Beaver and muskrat are common along with a number of nesting ducks and mergansers. It also receives moderate use by other migratory waterfowl. Three road bridges on the lower portion of the stream make that end of it accessible, however, the upper half of its warm water minnow feeder from the southwest in section 25 are rather inaccessible. A total of 5.2 miles of its 8.9 miles of stream bank is in Chequamegon National Forest Land ownership.

Spring Brook, T41N, R3W, Section 26 to Section 22
Surface Acres = 0.7, Miles = 1.5, Gradient = 60 feet per mile, M.P.A. = 46 ppm

A small,warm water drainage stream flowing into the East Fork of the Chippewa River through an extensive tag alder swamp and bog area. There is also open sedge and willow wetlands along the stream in areas recently inhabitated by beaver. Beaver are still present on its headwaters feeders. As a minnow stream, its fish population consists of white suckers, burbot, common shiners, creek chubs, blacknose and longnose dace, log perch, brook sticklebacks and johnny darters. Fluctuating water levels are a problem. Besides the beaver, muskrat are common along with a few nesting mallards and blue-winged teal. It is accessible at one road crossing and its entire length is in Chequamegon National Forest Land ownership.

Spring Brook, T44N, R4W, Section 8, to T45N, R4W, Section 23
Surface Acres = 6.2, Miles = 5.7, Gradient = 47 feet per mile, M.P.A. = 39 ppm

A high quality, spring fed trout stream flowing into the Brunsweiller River. This intermittent stream originates in Beaver Lake and picks up spring water before flowing through Seitz Lake. Seitz Lake also contributes spring water to Spring Brook. Its feeders are also trout waters. Brook trout are the most abundant and browns and rainbows are common. Near its outlet, a few warm water species are found including perch, bluegills and pumpkinseeds. A three-foot water control structure is located on approximately the south boundary line of section 26 where a federal fish hatchery was once operated. Although the impounding structure is still in existence, there is no flowage area beyond the stream bank since this is a high stream gradient riffle area. Most of the stream bank vegetation is upland hardwood with some tag alder swamp border. It is adequately provided with gravel spawning areas and instream cover has been improved by cooperative instream improvement projects between the U. S. Forest Service and Conservation Department in the middle portion of the stream. Muskrat and nesting mallards are present in the stream's upper part. Accessibility is good since four roads cross the stream and 11.1 miles of its 11.4 miles of stream bank is in Chequamegon National Forest Land ownership.

Squaw Creek, T43N, R3W, Section 3, to T44N, R3W, Section 26
Surface Acres = 1.6, Miles = 3.4, Gradient = 10 feet per mile, M.P.A. = 26 ppm

A medium to low quality trout stream, flowing mostly through a large tag alder and willow swamp into the Iron River. Although the stream has some good spring water sources, bottom conditions are unstable sand and silt. Old beaver flooding has deteriorated the fish habitat of the stream. Spawning areas for the brook trout are also scarce. Besides the beaver there are muskrat and a few nesting mallards and black ducks on the stream and its 200 acres of bordering wetlands. Accessibility is only by hiking trail and 5.8 of the stream's 6.8 miles of stream bank is in Chequamegon National Forest Land ownership.

Swamp Creek, T42N, R1E, Section 36, to T41N, R1E, Section 1
Surface Acres = 3.4, Miles = 0.8, Gradient = 3 feet per mile, M.P.A. = 17 ppm

Primarily a minnow stream, this warm water, drainage creek also has northern pike present in it along with a few perch, black crappies and rock bass. The stream has a rocky bottom, is broad and has extremes in gradient which range from rapid riffle areas to still pools. The feeders to the stream are also minnow waters and are extensively used by beaver at present. Only a short distance, 0.8 miles of the stream, is located in Ashland County near where its outlet flows into the Flambeau River. Besides the beaver, muskrat are common along with a few nesting puddle ducks and moderate use by other migratory waterfowl. It is accessible at two road bridges and none of its other bank frontage is in public ownership.

Tafelski Creek, T44N, R3W, Section 12 to Section 1
Surface Acres = 0.3, Miles = 0.6, Gradient = 166 feet per mile, M.P.A. = 35 ppm

Flowing from the base of a rock outcrop southwest of Mellen, it flows into the Bad River. Stream has good water quality and has brook trout present; however, fish production is limited. Although there are not many catchable sized trout in the stream, it does provide some spawning grounds for the Bad River. The upper sixty-five percent of the river has stream bank vegetation of hardwood upland, while the remaining portion is shrub swamp and fresh meadow. Because of the stream's small size, its other wildlife values are minor. It is accessible at one road crossing and it has no other public frontage.

Torch River, T43N, R4W, Section 22, to T42N, R4W, Section 19
Surface Acres = 24.3, Miles = 8.4, Gradient = 4 feet per mile, M.P.A. = 24 ppm

A warm water, drainage stream originating as the outlet from East Twin Lake. It then flows through Woodtick Lake and the Dead Horse Slough and out of the county to the West Fork of the Chippewa River. Its fish population is predominantly minnows. Streams flowing into the Torch River include Dingdong Creek, a marginal trout stream; the East Fork of the Chippewa River, a minnow stream; and two unnamed feeders from sections 17 and 18, both of which are minnow streams although the feeder in section 18 contains a few trout. Water quality is poor in that it has infertile, acid and dark brown water of low gradient. Much of the immediate watershed is old beaver flowage - fresh meadow areas. The stream is more important as a waterfowl, muskrat and beaver stream than for its fishery value. It is accessible from three road bridges and 14.1 miles of the 16.8 miles of stream bank is in Chequamegon National Forest Land ownership.

Trout Brook, T44N, R3W, Section 5, to T46N, R3W, Section 31
Surface Acres = 10.6, Miles = 8.8, Gradient = 70 feet per mile, M.P.A. = 32 ppm

Trout Brook flows north from the outlet of English Lake and into the Brunsweiller River. It is predominantly a brook trout stream, however, browns and rainbows are also present. Although the entire length of the stream is considered trout water, the portion lying north of Highway 13 is marginal in quality. Several small feeders flowing into Trout Brook are also trout streams. A granite quarry is located adjacent to the stream a half mile below English Lake. Past dumping of granite debris in this section has created a small impounded area, but downstream springs contribute a quantity of fresh cold water to Trout Brook to maintain its quality as a trout stream. Water level fluctuations are at times a problem to its habitat management. The predominant stream bank vegetation is upland hardwood and the lower half of the stream is mostly pastured. There is a licensed private fish hatchery pond in section 17, T45N, R3W, on a small feeder adjacent to the main stream. Because of a lack of adjoining wetlands, its furbearer and waterfowl use is not significant. It is accessible at four road bridges and 0.6 miles of the stream bank is in Chequamegon National Forest ownership.

Troutmere Creek, T45N, R4W, Section 8 to Section 6
Surface Acres = 1.5, Miles = 1.6, Gradient = 30 feet per mile, M.P.A. = 106 ppm

A small stream with high water quality flowing into the Marengo River near the Bayfield County line. Brown trout are common to the stream and some spawning areas are provided for trout migrating from the Marengo River. Bottom conditions tend to be unstable. About sixty percent of the stream bank is pastured and the bank vegetation is mostly grass and wooded upland. Other wildlife and waterfowl values are minimal. The stream is accessible by one town bridge and there is no other public frontage.

Tyler Forks River, T46N, R2W, Section 36, to T45N, R2W, Section 17
Surface Acres = 32.0, Miles = 6.6, Gradient = 18 feet per mile, M.P.A. = 23 ppm

Flowing from Iron County into east central Ashland County, it empties into the Bad River at Copper Falls State Park. The entire stream is considered trout water, although the upper five miles to the Iron County line is of lower quality than the downstream part. Brook and brown trout are common and a few rainbow trout are also present. The feeders to the Tyler Forks River, including Feldcher, Camp Four, Gehrman and Scott Taylor Creeks, are also trout stream. Brownstone Falls, located near the outlet is an effective barrier to migratory fish from Lake Superior. There is a variety of bottom conditions which vary from unstable sand bottom to bedrock and rubble bottom types near the Falls.

Tyler Forks River-continued

It also has deep pool areas and long shallow riffle sections. Stream bank cover is good and the predominant hardwood - conifer upland vegetation contributes to the scenic value of the stream as well as the trout habitat. About twenty percent of the stream bank is pastured. A pond adjacent to the river on an intermittent feeder is licensed as a private fish hatchery and is located in section 1, T45N, R2W. An active beaver dam is present on the river in section 11. Muskrat are common as well as a few nesting puddle ducks and mergansers. The stream is also used by other migratory ducks and coot. It is accessible at three road bridges and the portion of stream near the outlet is situated in Copper Falls State Park. A private campground is located just to the east of this area. A total of 0.6 miles of its stream bank is in Conservation Department ownership.

Vaughn Creek, T46N, R2W, Section 2 to Section 20
Surface Acres = 12.5, Miles = 6.9, Gradient = 16 feet per mile, M.P.A. = 71 ppm

A drainage stream originating in Ashland County and then flowing into the Potato River. It is a marginal trout stream having brook and rainbow trout present in it. Unstable bottom conditions along with fluctuating water levels are problems to its management. Stream bank vegetation is mostly aspen. Furbearer and waterfowl use is minimal. It is accessible at one road bridge and 0.7 of its stream banks is in Ashland County ownership.

Waboo Creek, T45N, R4W, Section 33 to Section 34
Surface Acres = 0.4, Miles = 1.1, Gradient = 39 feet per mile, M.P.A. = 20 ppm

A small, spring fed brook trout stream flowing into Spring Brook. Its primary value is providing Spring Brook with a trout spawning area. Much of the adjacent stream bank is swampland with tag alders being the most predominant vegetation. Because of the stream's small size, its other wildlife value is limited. One road crosses the stream and its entire stream bank is in Chequamegon National Forest Land ownership.

Weber Creek, T41N, R2W, Section 31
Surface Acres = 0.3, Miles = 0.5, Gradient = 25 feet per mile, M.P.A. = 32 ppm

A small, minnow inhabited drainage stream in the south central part of the county. It flows into Price County and the Pine Creek drainage system. Extreme water fluctuations are evident as well as extensive beaver use. The stream begins at an old beaver flowage area which is presently drained and is now a fresh meadow swamp. Because of its small size, its other wildlife and waterfowl values are minor. The stream is not accessible by road and none of its bank is in public ownership.

West Fork Chippewa River, T43N, R4W, Section 30, to T42N, R4W, Section 6
Surface Acres = 8.5, Miles = 2.8, Gradient = 3 feet per mile, M.P.A. = 50 ppm

A warm water, drainage stream flowing into Ashland County from Bayfield County and then west again into Sawyer County. A small flowage is located on the stream in section 32 (7) with a water control structure height of six feet. The river flows from 32 (7) into Upper Clam Lake before leaving the county. Although the stream is primarily minnow water, it also has perch, black crappies, rock bass and pumpkinseeds present. It is subject to extremes in water level fluctuations and beaver have made use of the stream by building numerous flowages on it. Muskrat are also common as well as a few nesting puddle ducks and other migratory waterfowl. The small feeder streams flowing into this river are also minnow streams and include the outlet stream from Mud Lake and another feeder from section 31. Stream bank vegetation is predominantly willow - tag alder swamp and occasional hardwoods. It is accessible at three road crossings and a total of 3.8 miles of the 5.6 miles of stream bank is in Chequamegon Forest and Ashland County ownership.

West Fork Swamp Creek, T42N, R1E, Section 1 to Section 12
Surface Acres = 2.8, Miles = 1.9, Gradient = 5 feet per mile, M.P.A. = 28 ppm

Flowing in and out of Ashland County from Iron County, this short section of stream is minnow water. Beaver use the stream extensively and extensive areas of fresh meadow and tag alder swamp have developed along the stream. Water quality is poor and the stream gradient is low. The principal water source is from tamarack bog and shrub swamp drainage. Besides the beaver, muskrat are common as well as a few nesting puddle ducks. It is accessible only by trail in Ashland County and 1.2 of its 3.8 miles of stream bank is in Ashland County Forest Land ownership.

Whiskey Creek, T44N, R4W, Section 7 to Section 18
Surface Acres = 3.6, Miles = 1.5, Gradient = 40 feet per mile, M.P.A. = 29 ppm

Beginning as a spring fed brook trout stream, it receives water from the Tea Lake outlet and becomes a broad sluggish drainage stream. It continued on this condition into Bayfield County where it eventually flows into the Marengo River. Brook trout are common in the area upstream from the Tea Lake outlet and habitat conditions for trout are good. Beaver are present in the lower portion of the stream and a few nesting mallards may also be found here. It is accessible from one road bridge and its entire length is in Chequamegon National Forest Land ownership.

White River, T46N, R4W, Section 6, to T48N, R3W, Section 26
Surface Acres = 181.6, Miles = 21.4, Gradient = 5 feet per mile, M.P.A. = 88 ppm

Originating in Bayfield County, it flows into Ashland County and the red clay soil region and eventually reaches the Bad River near Odanah. The White River Flowage, with a water control structure height of forty-nine feet, is located adjacent to the Bayfield County line on the White River. Characteristics of the stream are an unstable sand and clay bottom condition, fluctuating water levels and most of the stream is not easily accessible since only two roads cross the river. It is primarily a minnow stream, although an occasional rainbow trout may be caught during the spring migratory season as they migrate from Lake Superior up to the White River Flowage dam. The feeders to the river are mostly intermittent, however, the ones which do have a permanent flow such as Deer Creek, are all warm water minnow streams. It receives high use by migratory ducks and a number of other puddle ducks nest along the stream. Beaver are present. Of the stream's 42.8 miles of bank frontage, 12.0 miles are in Ashland County, Conservation Department and City of Ashland ownership.

Willerth Creek, T43N, R2W, Section 22, to T42N, R1W, Section 9
Surface Acres = 4.7, Miles = 4.8, Gradient = 18 feet per mile, M.P.A. = 32 ppm

Originating from a spring water source, it gradually deteriorates in water quality until it reaches its outlet into Sulls Lake on the East Fork of the Chippewa River. The upper two miles are medium quality brook trout water while the lower portion which receives warm water bog drainage from Augustine Lake and other swamp drainage water becomes a marginal trout stream. Beaver flowage areas in the lower portion have deteriorated the fish habitat and unstable sand and silt bottom conditions have eliminated spawning in this region. Besides the beaver, muskrat are common as well as a few nesting mallards and black ducks. It is accessible at four road crossings and 1.0 of the 9.6 miles of stream bank is in Ashland County Forest Land ownership.

Winks Creek, T46N, R2W, Section 26 to Section 15
Surface Acres = 1.2, Miles = 1.9, Gradient = 101 feet per mile, M.P.A. = 61 ppm

A small, but high quality spring feeder stream to the Potato River. Brook trout are common here. Most of the stream bottom is sandy although there are a few gravel areas. Stable water levels along with the spring water source also contribute to the stream's trout habitat. Stream bank vegetation is mostly aspen plus some conifer upland and willow shrub swamp. Furbearer and waterfowl use is minimal. It is not accessible by road and none of its banks is in public ownership.

Wood Creek, T48N, R3W, Section 21 to Section 11
Surface Acres = 0.6, Miles = 0.5, Gradient = 10 feet per mile, M.P.A. = 40 ppm

A drainage stream flowing into the Kakagon Slough which has an intermittent flow except near where it enters the slough. In this area it becomes a broad sluggish stream with a warm water fish population that includes a few northern pike. Bottom conditions are mainly unstable sand and muck mixed with clay. Muskrat and beaver are present on the stream as well as a few nesting puddle ducks. The stream is not accessible by road except on the intermittent portion and none of its stream bank is in public ownership.

SUMMARY OF INVENTORY DATA

The following comments and tables are the result of a compilation of the data obtained from general waters information forms prepared for the waters of Ashland County. The forms were completed as a part of the waters classification and inventory program.

To adequately illustrate the location, significance and public use possibilities of these waters, four county maps were prepared showing all water resources in the county. Drainages, stream widths and lengths, and lake sizes are presented on each map. Of the four maps, one indicates the water fertility and glaciation types (Fig. 5), another the fishery resources of the various lakes and streams (Fig. 6), another, public lands by ownership and the public use areas present in the county (Fig. 7), and the fourth shows access (Fig. 8).

In order to present a summary of the various individual resources of each body of water, two appendices are included, one for lakes and the other for streams. The appendices contain most of the specific information gathered in the inventory and include the following items: surface acreages, miles of shoreline, shore development figures, maximum depths and widths for streams, stream lengths, miles of public frontage, methyl purple alkalinity tests, conductance and pH readings, comparative water color, date of sampling, areas of direct drainage and of total watersheds, types and approximate areas of wetlands, miles of trout streams, drainage systems, and average stream gradients. The comments that follow refer to some of the items and data in these appendices.

Quantitative Aspects

The total inland surface water area of the county is 7,300 acres. Of this figure, 4,854.4 acres is the surface area of 156 lakes and impoundments, and 2,445.6 acres is the surface area of the 96 named streams. Total stream length is 548.1 miles, of which 257.7 miles are considered to be trout streams. Frontage on both sides of streams amounts to about 1,096.2 linear miles, while lake frontage totals 200 miles. Even though the stream frontage is greater than that for lakes, if one were to compare the amount of stream frontage to lake frontage on an average per acre basis, there would be 2,367 feet of stream frontage to a surface acre of water, and 218 feet of lake frontage per acre of lake surface.

The area of the natural lakes accounts for 94 percent of the total lake surface area in the county, while the other 6 percent constitutes impounded waters. Size classes of natural lakes and impoundments are noted in Table 3. Only 17 of the county's 156 lakes are over 100 acres in size, and these 17 lakes account for almost 60 percent of the surface lake acreage. Maximum lake depths vary considerably from shallow ponds to the deeper bog lakes with their characteristic steep-sloping shores. Tea Lake has the greatest maximum depth, 42 feet. Already mentioned earlier in the summary are the larger streams of the county, the Bad River in the north and the East Fork of the Chippewa River in the south. Other sizeable streams include the Flambeau River, crossing the southeast corner of the county and the Marengo and White Rivers in the north. Gradients of the streams vary from extremely high to extremely low. The steepest is Tafelski Creek that flows down the gorge of the Bad River, with an average drop of 166 feet per mile. The lowest occurs on the Flambeau River and several streams flowing into the East Fork of the Chippewa River, namely, Hungry Run, Schraum Creek, Swamp Creek, the West Fork of the Chippewa River, and Nelson Creek, a small stream ambling through a tamarack bog. All of these streams have a gradient of 2 feet per mile. Stream gradients in general are highest on the Bad River watershed and quite low on the glacial outwash plain in the south half of the county.

Table 4. Size classes of Ashland County's natural lakes and impoundments and streams

Lakes

Acreage classes	Natural lakes No.	Natural lakes Total acreage	Impoundments No.	Impoundments Total acreage	Total No.	Total Acreage
Ponds 0.1 - 9.9	83	256.5	5	18.3	88	274.8
Small 10.0 - 49.9	39	922.3	1	47.4	40	969.7
Small medium 50.0 - 99.9	8	597.5	3	211.0	11	808.5
Medium 100.0 - 199.9	12	1,606.7			12	1,606.7
Medium 200.0 - 499	5	1,194.7			5	1,194.7
Medium large 500 - 1,000	-			-	0	
Large 1,000	-			-	0	
Total	147	4,577.7	9	276.7	156	4,854.4

Stream size classes

Mean width - entire stream	No.	Area	Length
Less than 10 feet	62	129.4	161.6
10 - 19 feet	19	215.6	133.2
20 - 39 feet	8	207.5	64.4
40 or more feet	7	1,880.3	183.5
Total	96	2,432.8	542.7

Table 5. Lake types in Ashland County

Lake type	Number	Acreage - Range		Total acreage
Hard water drainage	10	0.5	184.4	341.1
Soft water drainage	30	0.7	294.2	2,670.4
Hard water seepage	18	0.7	18.9	80.5
Soft water seepage	28	0.4	165.5	952.3
Acid bog	57	0.3	144.2	777.1
Alkaline bog	0			
Spring ponds	13	0.1	6.6	33.0

Lake Types

A few generalizations about surface water characteristics may be helpful at this point before discussing further the various types into which lakes may be classified. The management, regulation, and conservation of water for multiple use is dependent upon a number of basic characteristics of lake and stream habitats. As stated earlier in the general setting of the waters of Ashland County, the geologic history of the region and the nature of the soil over which the lake lies which is the source of ground and surface water runoff, are major factors in determining the character of a lake or stream. However, they are not the sole factors that influence the water's character. For example, waters may receive runoff from agricultural lands and effluents of waste matter that have been richly supplied with critical nutritive elements and compounds. These nutrients become incorporated in the food cycle of a lake or river, and increase the amount of vegetation, fish life and algae bloom that occurs in them. A few other items which determine water types are the depth of a lake and the shape of the shoreline and bottom. These may be limiting factors in fish and waterfowl production.

The interrelationships of factors contributing to the character of surface waters and their trophic nature and productivity are diagrammed by Fig. 9. One of the factors of primary importance is the fertility of water, the basis for organic production. Its origin, significance, and modification can be traced on the chart.

The lakes of Wisconsin and Ashland County fall into four main types: hard water drainage, soft water drainage, hard water seepage, and soft water seepage lakes. To these four classes, three other subtypes of lakes have been added for more descriptive purposes in the inventory. They are acid bog lakes, alkaline bog lakes, and spring ponds. Of these last three types, the alkaline bog lake does not occur in Ashland County. The only possible exception to this is the pond on the outer island which has a bog shore on the inland side of the lake and seepage lake characteristics toward the Lake Superior side. Evidently some mixture of water occurs here between the lakes, since the pH is alkaline, and bog vegetation is not typical in the sand dune beach ridge that separates the two lakes, but yet bog vegetation is common on the other shores of the pond. This characteristic is true also of the other lakes located on the Apostle Islands.

The most common type of inland lakes in Ashland County are the acid bog lakes. There are 57 of these and they range in size from 0.3 to 144.2 acres in size, and they have the typical acid pH, dark colored and infertile water quality. A few, however, such as those east of Glidden have clear water. The spring pond or limnokrene lakes that occur in Ashland County number 13 and range in size from 0.1 to 6.6 acres. These are mostly quite shallow and filled with silt and detritus. Of the remaining 86 lakes, all but 28 have soft water characteristics and are equally divided between seepage and drainage type lakes. The hard water lakes are generally those that are located in the northern red clay drainage region and those located on the Apostle Islands.

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The hard water lakes are generally those that are located in the northern red clay drainage region and are old meander ox-bow lakes that have been separated from the Bad River. Table 4 summarizes the varioux lake types that are found in the county. As already suggested, the significant limnological characteristics peculiar to these classes are based on physical (i.e. water source, effects of vegetation) and chemical properties. Correspondingly, the production of plant and animal life varies with respect to each type of lake. A more detailed explanation of the seven types may be found in the "definitions" section of this summary. Since this classification system is a somewhat arbitrarily determined method of evaluation, there may be some lakes that exhibit characteristics of more than one type. However, borderline cases and overlapping of types occur only infrequently.

Water Fertility

The factor used in the measurement of fertility is alkalinity (M.P.A.), expressed as the amount of available carbonates, bicarbonates and hydroxides in parts per million of water. The lakes of Ashland County are mostly low in alkalinity and are thus considered to be of soft water quality. The pH (hydrogen ion concentration) range is quite low, making the water acid (below 7.0 pH), rather than alkaline (above 7.0).

Table 6 summarizes the above items for the surface waters of this county. The total concentration of dissolved electrolytes is included for these waters also. This is expressed in terms of electrical conductance of waters, or micromhos at 77 degrees Fahrenheit. This information corresponds roughly, though on a different scale of values, to the methyl purple alkalinity test for fertility and is also useful in management work.

A more complete chemical analysis of some Ashland County lakes was made in order to determine the relative quantities of their nutrients (see Table 7). Trace elements, however, were not included in the analysis. With the exception of the pH and conductance readings, all other figures are expressed in parts per million in Table 7. These measurements, although not conclusive, indicate shortage nutrients, especially P, is in low supply. The White River Flowage has an alkalinity of 86 parts per million (Fig. 5 map). This would place the lake in the categories of "medium hard" water and "high" production of fish and plant life according to Moyle (1946) in his water fertilities classification scale. Cycle Lake, with its total alkalinity of 11 parts per million, would be classed as "very soft" water and have a low productivity of fish and plant life. Lake Superior has more dissolved solids in it than most of the inland lakes.

Light penetration in many of these waters is very low because of their staining derived from bog waters. Secchi disk readings of as little as 2 and 3 feet were encountered. Low light penetration also would affect productivity.

Inland Fisheries

Lake and stream fisheries for the county are illustrated in Fig. 6, a basic resources map with fisheries coded in color. Major fishing areas in Lake Superior waters are also marked. The inland surface waters of Ashland County that are of importance in providing a fishery resource are summarized as follows: of the 156 lakes with a total surface area of 4,854.4 acres -- 93 lakes with a total area of 4,333.4 acres have game fish and panfish populations. The remaining 63 lakes with their 521 surface acres have, if any, only minnow populations. The fishing waters are further classified in Table 8 by the number of lakes and their total acreages where such species occur. Also, the occurrence of minor fish species, mostly the minnows, in named streams of the county are listed in Table 9.

(a) Muskellunge are common in 26 lakes, having a total area of 2,776 acres. The muskellunge is the predominant predator game fish of the inland lakes and three largest streams in the county, the Bad, the East Fork of the Chippewa River, and the Flambeau River. The size of the lakes in which they occur vary from 5.4 acre Frank Lake to 244.2 acre English Lake.

(b) Walleyes occur in 10 lakes and in the Bad and East Fork of the Chippewa Rivers. The 1,495 acres of inland lakes in which they occur are listed as follows, in the order of their importance: Kakagon Slough, Upper Clam Lake, Bad River Slough, Bear, Meder, Gordon, Zielke, Pelican, Tea, and English Lakes. Walleyes have a tendency to become overabundant and small in size in some of the lakes of the county, and as a result, panfish populations have subsequently been depleted.

(c) Northern pike occur in 11 of the inland lakes having a total acreage of 828, and the Bad, Flambeau and Kakagon Rivers. They are conspicuously absent in the Chippewa River drainage system of Ashland County. The waters commonly fished for northern pike other than the ones mentioned are the Bad River and Kakagon Slough, Honest John Lake and Little Butternut Lake.

(d) Largemouth bass occur in 47 lakes having a total area of 2,893 acres and in the East Fork of the Chippewa River and Kakagon River.

(e) Smallmouth bass are less common and occur in only 4 inland lakes, with a total area of 661 acres, and they include Bear Lake, Pelican Lake, Gallilee Lake and the Bad River Slough. They are regularly caught in Chequamegon Bay. Streams in which they occur are the East Fork of the Chippewa River, the Bad River, and the Flambeau River.

(f) Panfish occur in 81, or about one-half, of the lakes and total surface acreage amounts to 4,245. Waters noted for being better fishing lakes for panfish include English, Gallilee, Mineral, Beaver Dam Lakes and the Bad River Slough, and of minor importance are Conley and Knab Lakes. General throughout most of the county in the other panfish lakes are populations of slow-growing and overabundant panfish which is mainly due to the poor water quality conditions of this region.

(g) Trout lakes in Ashland County include the rehabilitated Cammerer and Trout Lakes and eight small spring ponds connecting trout stream outlets.

There are 548.1 linear miles of named streams in Ashland County. The total estimated surface area of these streams is 2,445.6 acres. Their importance is as follows:

(a) Trout streams number 56 and comprise 259.6 miles of stream. Better than average quality water exists in 25 miles of stream and includes the following waters: Augustine Creek, Ballou Creek, Devils, Hildebrandt, Krause, Pine, and Troutmere Creeks, Spring Brook and the Tyler Forks River. About half the total trout stream mileage, or 124.1 linear miles, is medium quality water and includes 42 streams. The remaining 110.5 miles is marginal trout water with low quality habitat conditions or poor water quality. Brook trout is the major species and these occur in most of the streams while brown are less common and occur mostly in the feeder streams of the Bad River. The least common trout, the rainbow, is also limited to streams feeding the Bad River. They reproduce in only a few of the waters of the county. Migratory lake rainbows enter the streams during the spring and may be caught from the Bad, Potato, Marengo, and occasionally the White Rivers, although the latter is not considered to be trout water. Use of these streams by migratory rainbows, however, is much less extensive than those of Bayfield or Douglas Counties. Geographically the better trout water occurs along the north slope of the Penokee Range.

Table 6. Fertility of waters in Ashland County

	Number of samples	Range	Mean
pH Acidity:			
Lakes	156	4.9 - 8.8	6.5
Streams	96	5.4 - 7.6	6.7
Methyl Purple Alkalinity (ppm):			
Lakes	156	2-119	33
Streams	96	5-182	42
Conductance: (micromhos)			
Lakes	156	10 - 298	73
Streams	96	25 - 343	85

Table 7. Chemical analysis of the waters of some Ashland County lakes.*

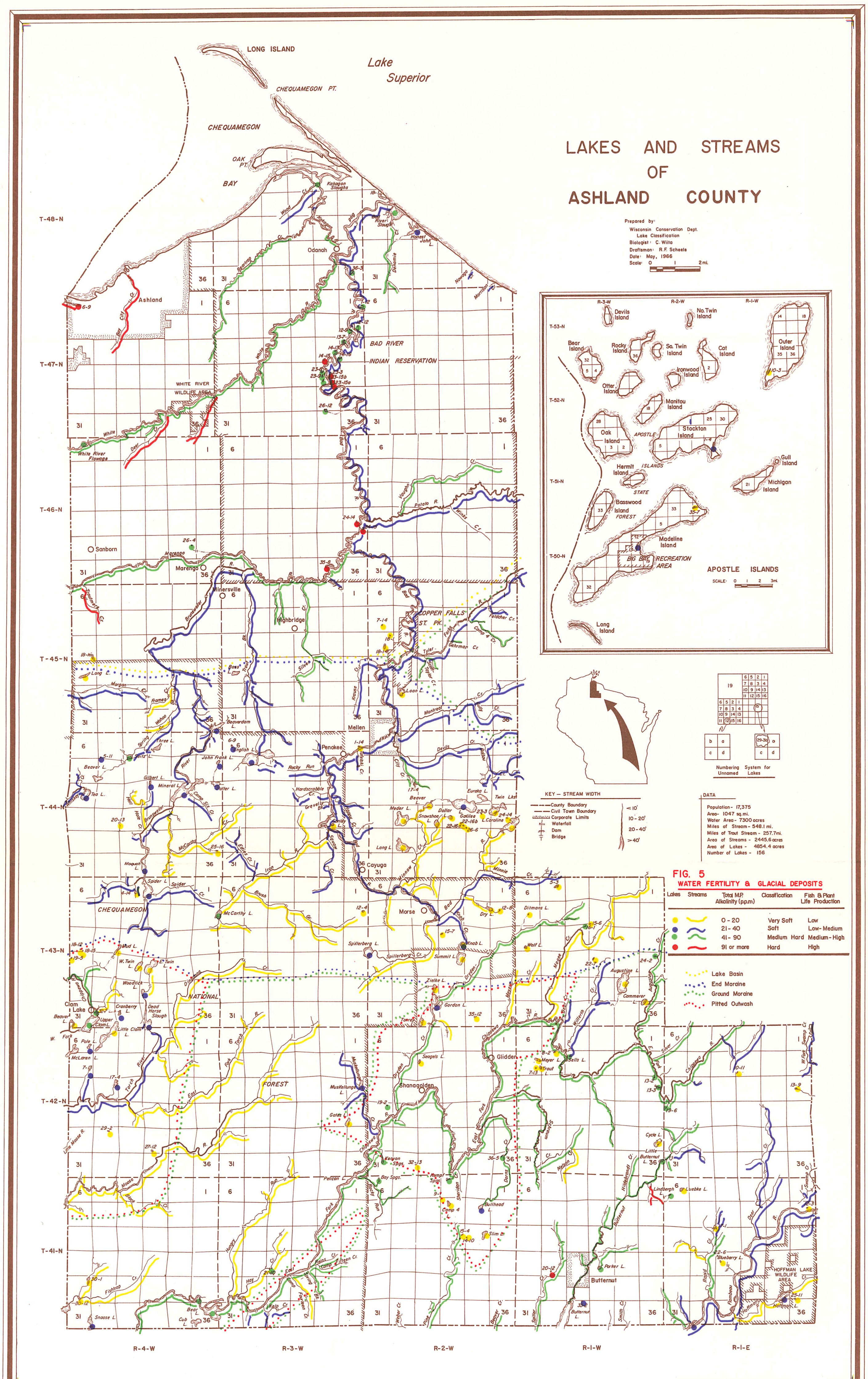
Sample	MOA	Specific Conductance (mmhos at 77° F.)	pH	PO4(T)	PO4(D)	NH3(N)	KN	NO3(N)	Cl	SO4	Ca	Mg	Na	K	Fe	Date of Sampling
Augustine Lake	9	28	6.4	—	0.042	—	—	0.50	1.0	1.0	2.5	0.3	1.25	0.50	0.19	May 3, '62
Bass Lake	10	51	6.6	—	0.083	—	—	0.13	2.0	1.0	3.8	0.3	1.25	0.50	0.08	May 3, '62
English Lake	29	70	6.9	0.02	0.010	0.04	0.41	0.21	1.1	1.0	8.5	4.5	1.40	0.67	0.53	May 6, '65
Gordon Lake	21	72	6.5	—	0.010	0.10	0.50	0.40	1.8	***	***	***	***	***	***	May 1, '61
Lake Superior**	46	92	7.4	0.005	***	***	***	***	1.9	3.2	12.4	2.8	1.10	0.60	—	No date given
Mean for NW Area Lakes	38(81)	83(71)	6.9(81)	0.12(41)	0.070(81)	0.07(72)	0.53(80)	0.24(73)	1.3(81)	2.6(72)	9.9(73)	2.9(73)	1.80(73)	0.98(73)	0.18(73)	1960-65

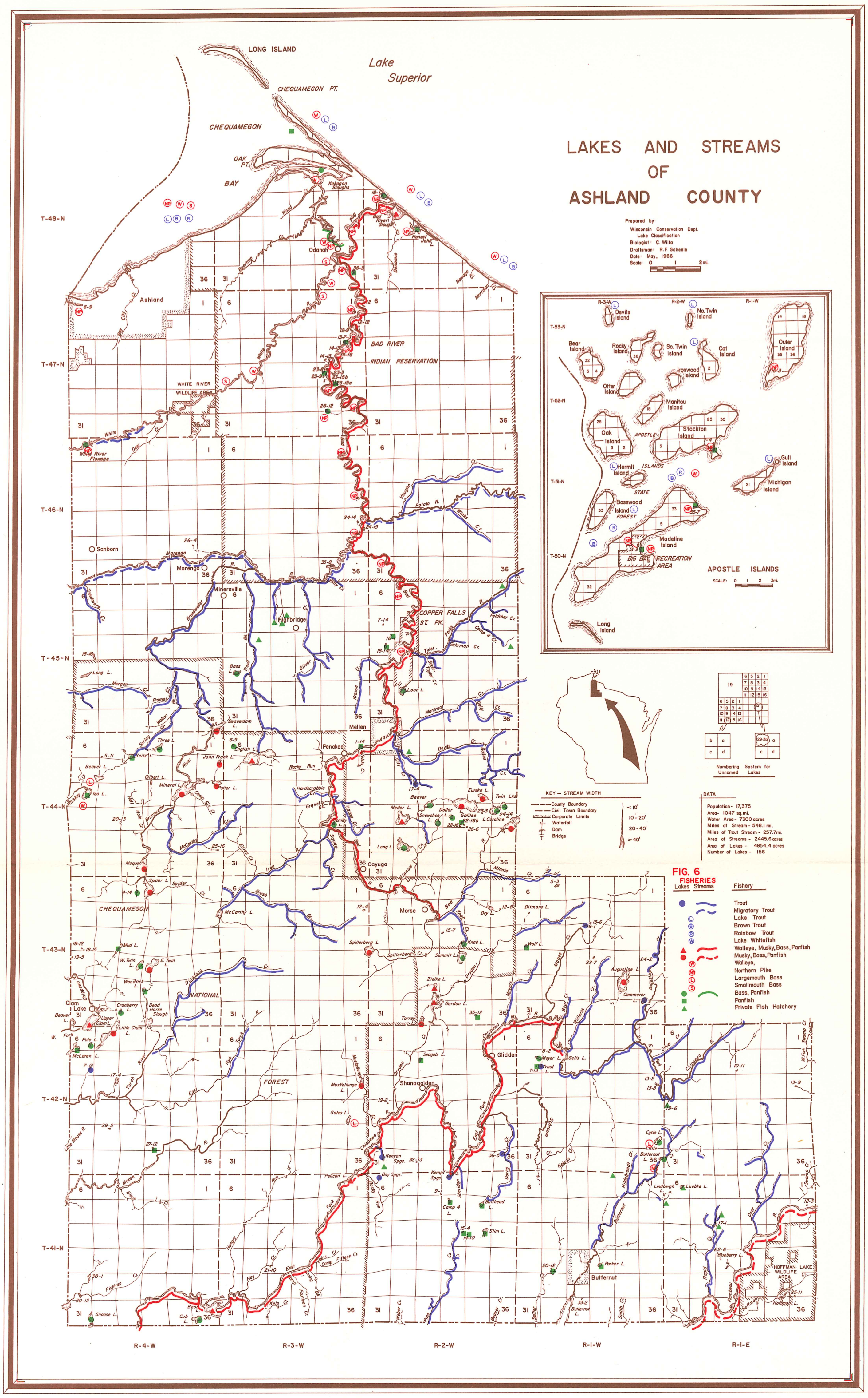
No. of lakes is shown in parentheses

* Except for specific conductance and pH, results are in parts per million.

** Source: U.S. Bureau of Commercial Fisheries data reprinted in Limnology of North America.

*** Data not collected.


LAKES AND STREAMS OF ASHLAND COUNTY
Prepared by:
Wisconsin Conservation Dept.
Lake Classification
Biologist: C. Wilta
Draftsman: R.F. Scheele
Date: May, 1966
Scale: 0 1 2 mi.
Lake Superior
CHEQUAMEGON BAY
LONG ISLAND
CHEQUAMEGON PT.
OAK PT.
BAD RIVER INDIAN RESERVATION
WHITE RIVER WILDLIFE AREA
COPPER FALLS ST. PK.
CHEQUAMEGON NATIONAL FOREST
HOFFMAN LAKE WILDLIFE AREA
Ashland
Odanah
Sanborn
Marengo
Minersville
Highbridge
Mellen
Penokee
Cayuga
Morse
Clam Lake
Shanagolden
Glidden
Butternut
T-48-N
T-47-N
T-46-N
T-45-N
T-44-N
T-43-N
T-42-N
T-41-N
R-4-W
R-3-W
R-2-W
R-1-W
R-1-E
APOSTLE ISLANDS
SCALE: 0 1 2 3mi.
Devils Island
No. Twin Island
Outer Island
Bear Island
Rocky Island
So. Twin Island
Cat Island
Ironwood Island
Otter Island
Manitou Island
Oak Island
Stockton Island
Gull Island
Michigan Island
Hermit Island
Basswood Island
Madeline Island
Long Island
APOSTLE ISLANDS STATE FOREST
BIG BAY RECREATION AREA
Numbering System for Unnamed Lakes
KEY — STREAM WIDTH
County Boundary
Civil Town Boundary
Corporate Limits
Waterfall
Dam
Bridge
<10'
10-20'
20-40'
>40'
DATA
Population- 17,375
Area- 1047 sq.mi.
Water Area- 7300 acres
Miles of Stream- 548.1 mi.
Miles of Trout Stream- 257.7mi.
Area of Streams- 2445.6 acres
Area of Lakes- 4854.4 acres
Number of Lakes- 156
FIG. 5
WATER FERTILITY & GLACIAL DEPOSITS
Lakes Streams Total M.P. Alkalinity (p.p.m) Classification Fish & Plant Life Production
0-20 Very Soft Low
21-40 Soft Low-Medium
41-90 Medium Hard Medium-High
91 or more Hard High
Lake Basin
End Moraine
Ground Moraine
Pitted Outwash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CHEQUAMEGON PT.
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OAK PT.
Kakagon Sloughs
Odanah
Ashland
BAD RIVER INDIAN RESERVATION
WHITE RIVER WILDLIFE AREA
White River Flowage
Sanborn
Marengo
Minersville
Highbridge
COPPER FALLS ST. PK.
Mellen
Penokee
Cayuga
Morse
CHEQUAMEGON NATIONAL FOREST
Clam Lake
Shanagolden
Glidden
Butternut
HOFFMAN LAKE WILDLIFE AREA
T-48-N
T-47-N
T-46-N
T-45-N
T-44-N
T-43-N
T-42-N
T-41-N
R-4-W
R-3-W
R-2-W
R-1-W
R-1-E
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Area of Streams- 2445.6 acres
Area of Lakes- 4854.4 acres
Number of Lakes- 156
FIG. 6
FISHERIES
Lakes Streams
Fishery
Trout
Migratory Trout
Lake Trout
Brown Trout
Rainbow Trout
Lake Whitefish
Walleye, Musky, Bass, Panfish
Musky, Bass, Panfish
Walleye,
Northern Pike
Largemouth Bass
Smallmouth Bass
Bass, Panfish
Panfish
Private Fish Hatchery

Table 8. Summary of fishery resources in Ashland County inland lakes

Fish species	No. of lakes having species	Acres of surface waters having species
Muskellunge	26	2,776
Walleye	10	1,495
Northern pike	11	828
Largemouth bass	47	2,893
Smallmouth bass	4	661
Panfish	81	4,245
Trout lakes & springs	10	33
Minnow only, or none	63	521
Total number and acres in county	156	4,854

Table 9. Occurrence of minor fish species in named streams of Ashland County

Common Name	Scientific Name	No. of streams occurring in
Creek chub	Semotilus atromaculatus (Mitchill)	66
White sucker	Catostomus commersoni (Lacepede)	55
Blacknose dace	Rhinichthys atratulus (Hermann)	41
Common shiner	Notropis cornutus (Mitchill)	41
Johnny darter	Etheostoma nigrum, Rafinesque	38
Brook stickleback	Eucalia inconstans (Kirtland)	32
Central mudminnow	Umbra limi (Kirtland)	30
Longnose dace	Rhinichthys cataractae (Valenciennes)	26
Slimy sculpin	Cottus cognatus, Richardson	19
Burbot	Lota lota (Linnaeus)	17
Log perch	Percina caprodes (Rafinesque)	10
Northern redbelly dace	Chrosomus eos, Cope	7
Northern redhorse	Moxostoma macrolepidotum (LeSueur)	6
Redside dace	Clinostomus elongatus (Kirtland)	4
Trout-perch	Percopsis omiscomaycus (Walbaum)	3
Fathead minnow	Pimephales promelas, Rafinesque	3
Fantail darter	Etheostoma flabellare, Rafinesque	2
Longnose sucker	Calostomus catostomus (Forster)	2
Northern hog sucker	Hypentelium nigricans (LeSueur)	2
Golden shiner	Notemigonus crysolencas (Mitchill)	2
Stoneroller	Compostoma anomalum (Agassiz)	1
Bluntnose minnow	Pimephales notatus (Rafinesque)	1
Rainbow darter	Etheostoma caeruleum, Storer	1
Iowa darter	Etheostoma exile (Girard)	1
Pearl dace	Semotilus margarita (Cope)	1

Source of scientific names: American Fisheries Society, Special Publication No. 2, a list of common and scientific names of fishes from the United States and Canada, Ann Arbor, Michigan. 1960

(b) The principal warm water fishery streams are the East Fork of the Chippewa River, the Flambeau River, and a portion of the Bad River. In fish species composition the Bad River has muskellunge, northern pike, walleye, smallmouth bass, and panfish. The East Fork of the Chippewa River has muskellunge, walleye, largemouth and smallmouth bass and panfish. The Flambeau River is most noted for muskellunge, northern pike and smallmouth bass.

(c) The remaining 187.5 miles of streams in Ashland County have forage minnows as their main fishery, although some panfish, northern pike, etc. may be present in some of these 38 streams.

Fifteen licensed private fish hatcheries operate in the county, as compared to 1,128 in the state. Of the 3,550 fishing licenses sold during 1964 in Ashland County, 41 percent were purchased by nonresidents. The county accounted for 0.4 percent of the total number of resident and nonresident fishing licenses sold in the state that year.

Wetland Resources

An adequate wetlands inventory and classification is not available for Ashland County, however, it is estimated that about 170,000 acres of all types of wetlands exist in the county. This is about 25 percent of the county area. The wetlands adjoining the surface waters in the county amounts to about 79,000 acres on streams with an additional 23,000 acres adjoining lakes. The remaining 68,000 acres are inland wetlands and these, plus a large majority of the others just mentioned are mainly conifer swamps and bogs, and are minor in value to waterfowl and furbearers. An abundance of beaver exists in the streams south of the Penokee Range. Habitat conditions are ideal on these low gradient water courses with marshy stream basins bordered by large tracts of aspen. Since the majority of the isolated inland lakes are bog lakes, they do not provide adequate habitat conditions for beaver and waterfowl.

The waters of the county which afford the highest relative value to waterfowl included the Kakagon River and Slough, Wood Creek, Honest John Lake, Bear Trap Creek, and the East Fork of the Chippewa River, including Bear Lake. The White River Wildlife Area and the Hoffman Lake Wildlife Area are primarily game management lands but are managed for upland game rather than waterfowl. The most common nesting waterfowl are blue-winged teal, mallards, and much lesser numbers of wood ducks, black ducks and ring-necked ducks. Other waterfowl of minor importance nesting here include mergansers, American widgeon, green-winged teal, and red-breasted mergansers. Only rarely do other species of waterfowl nest in this area of the state. The most abundant migratory waterfowl during the spring and fall seasons in Ashland County are coot, mallards, ring-necks and scaup. Less common are black ducks, goldeneyes and blue-winged teal, and more rare are wood ducks and buffleheads. Migratory birds that are occasionally found here are the redheads, canvasbacks, American widgeon, pintails, green-winged teal, shovelers, mergansers, red-breasted mergansers, gadwall, ruddy ducks, and old squaw. Blue, snow, and Canada geese, and whistling swans are also a part of the migratory scene, as well as are a number of other lesser species. The reason some species of ducks are not found in Ashland County in any appreciable numbers is due to the fact that it lies on the fringes of the major flight lines. The quantity of duck habitat is small or absent and aquatic vegetation which is their primary food supply is lacking or only found in limited quantities in the infertile waters of this county.

Of the 2,180 trapping licenses issued in the state during 1964, only 15 were issued in Ashland County. Of the 378,763 resident small game and voluntary sportsman's licenses sold in the state, the county accounted for 2,191 (0.6 percent of these licenses) and 1,795 (1.1 percent) of the 164,167 resident deer licenses were sold in Ashland County.

Boating

Only 4 inland lakes of over 200 acres in size offer any suitable surface water to a fast boater. The total water area of these lakes amounts to 900 acres and is only 12 percent of the surface waters of the county. The four lakes are Bear, English, Gallilee, and Mineral. Motorboating is also available on the lower end of the Bad River and the outlying waters of Lake Superior. Boating activity on the latter, however, is hampered considerably by unpredictable winds and only the more adventurous persons boat there.

The diagrammatic presentation of stream widths on the waters map, indicates sizes of water courses and the streams that may have canoeing or boating potential. Streams less than 20 feet wide will have practically no value; those from 20 to 40 feet wide will have limited value; while those over 40 will be readily canoeable waters, except for high stream gradients and waterfalls, and boulder-strewn bottoms which may interfere with this activity. During 1963 and 1964, aerial boating observations were made by law enforcement and other classification personnel. Table 10 summarizes the boating picture as observed on weekdays and holiday weekends. There were only two water skiers on any of the lakes during these observation flights.

The boating density for the 32 lakes checked in Ashland County, a total of 10,603 acres on all flights, had an average of 1 boat in use per 63 acres of surface water. On December 31, 1965, there were 1,587 boats licensed in Ashland County. Of these, sixteen were sail, six were inboard motorboats, and the remaining boats were outboard motor. The boats registered in Ashland County are 0.65 percent of the state's total but this is not entirely representative of the boating use here. Transient boats from other counties and out of state are perhaps equally as numerous, particularly on Lake Superior.

Swimming

Most of the larger lakes in Ashland County contain some qualifications that make them desirable for swimming beaches. Facilities for this activity are provided at Copper Falls State Park on Loon Lake, Big Bay Beach on Madeline Island, and at Prentice Park on Lake Superior on Chequamegon Bay. Cold water limits the use of Lake Superior waters for this purpose to some extent. The swimming season is generally short, and even then, water temperatures are not very high. Usually, resorts maintain some swimming areas. A few lakes which are used for swimming that have no developed facilities are Bass, Bear, Gordon, Mineral and Little Clam Lakes. Qualifications of clear water and firm, sandy beaches are not readily available however. The lakes of the terminal moraine in the midsection of the county often have mixed gravel and sand bottoms, steep beaches, and, if small in size, they have silt-covered bottoms and brown colored water. The bog-type lakes, of which there are many, have characteristic mats of vegetation bordering the shore, sharp drop-offs, brown water and mucky bottoms, making them unsuited for swimming. Algae blooms are seldom a problem, but swimmers itch has occurred recently in several of the lakes.

Table 10. Summary of aerial boating observations

Lake size classes	No. of lakes	Total acreage on all flights	Fishing boats	Pleasure boats	Skiing boats	Total Boats	Acres per boat	Winter fish shacks
0-49	25	800.7	4	1	0	5	160	2
50-199	47	5,332.4	60	0	1	61	87	0
200-499	19	4,469.9	103	1	1	105	43	0
Total	91	10,603.0	167	2	2	171	63	2